

ORDER NO. MD0502028C3

Service Manual

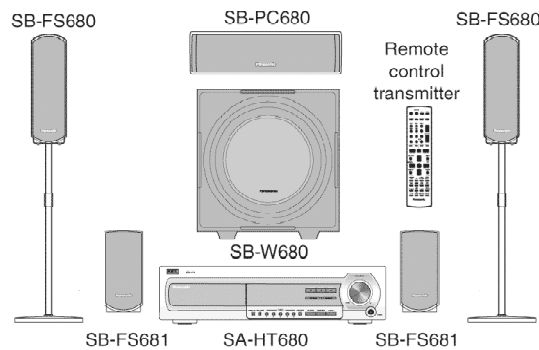
DVD Home Theater Sound System



SA-HT680PL

Colour

(S).....Silver Type



SPECIFICATIONS

Specifications

● General

Power Source: AC 120V, 60Hz
Power consumption: 280 W
Dimensions (W×H×D): 430×105×381 mm
Mass: 7.1 kg

● Amplifier section

RMS Output Power: Dolby Digital Mode

● Total RMS Dolby

Digital mode Power: 600 W

At 1kHz and total harmonic of 10%

● Front: 55 W/ Channel (6 Ω)
● Center: 160 W/ Channel (6 Ω)
● Surround: 55 W/ Channel (6 Ω)

At 100Hz and total harmonic of 10%

● Active subwoofers: 220 W/ Channel (4 Ω)

FTC Output Power: Dolby Digital Mode:

● Total FTC Dolby Digital mode Power:

390 W

At 120Hz-20kHz and total harmonic of 1%

● Front: 35 W/ Channel (6 Ω)
● Center: 110 W/ Channel (6 Ω)
● Surround: 35 W/ Channel (6 Ω)

At 45Hz-120Hz and total harmonic of 1%

● Subwoofer: 140 W/ Channel (4 Ω)

● FM tuner section

Frequency Range: 87.9-107.9MHz
(200kHz in step)
87.5-108.0MHz
(100kHz in step)

Sensitivity: 2.5 μ V (IHF)

S/N 26dB 2.2 μ V

Antenna Terminal: 75 Ω (non balance)

● AM tuner section

Frequency Range: 520-1710kHz (10kHz in step)

AM Sensitivity S/N 20dB at
1000kHz: 560 μ V/m

Phone Jack:

Terminal: Stereo 3.5mm jack

● Disc section

Discs played [8 cm or 12 cm]:

- (1) DVD-RAM (DVD-VR compatible, JPEG formatted discs)
- (2) DVD-Audio
- (3) DVD-Video
- (4) DVD-R, DVD-RW (DVD-Video compatible)
+R, +RW (Video compatible)
- (5) CD-Audio (CD-DA)
- (6) Video CD

(7) SVCD (Conforming to IEC62107)

(8) CD-R/CD-RW (CD-DA, Video-CD, SVCD, MP3, WMA, JPEG formatted discs)

(9) MP3/WMA

● Compatible compression rate:

MP3: between 32 kbps and 320 kbps

WMA: between 48 kbps and 320 kbps

● Maximum number of recognizable audio and picture contents and groups:

4000 audio and picture contents and 400 groups

(10) JPEG

● Exif Ver 2.1 JPEG Baseline files

● Picture resolution: between 320 x 240 and 6144 x 4096 pixels (sub sampling is 4:2:2 or 4:2:0)

● Maximum number of recognizable audio and picture contents and groups:

4000 audio and picture contents and 400 groups

(11) HighMAT Level 2 (Audio and Image)

Pick up:

Source of light beam: Semiconductor Laser

Wavelength:

● CD: 785nm

● DVD: 662nm

Audio output (DISC):

Number of channels: 5.1 ch (FL, FR, C, SL, SR, SW)

● Video section

Video system:

Signal system: NTSC

Composite video output:

Output level: 1 Vp-p (75 Ω)

Terminal: Pin jack (1 system)

S-video output:

Y output level: 1 Vp-p (75 Ω)

C output level: NTSC; 0.286 Vp-p (75 Ω)

Terminal: S terminal (1 system)

Component video output (480P/480I):

Y output level: 1 Vp-p (75 Ω)

PB output level: 0.7 Vp-p (75 Ω)

PR output level: 0.7 Vp-p (75 Ω)

Terminal: Pin jack (Y: green, PB: blue, PR: red) (1 system)

Power consumption in standby mode:

approx 0.5W

Note:

1. Specifications are subject to change without notice. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Solder:

This model uses lead free solder (PbF).

system	SC-HT680
Main unit	SA-HT680
Front speakers	SB-FS680
Center speaker	SB-PC680
Surround speakers	SB-FS681
Active subwoofer	SB-W680

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.



HighMAT and the HighMAT logo are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.



, HDCCD®, High Definition Compatible Digital® and Pacific Microsonics™ are either registered trademarks or trademarks of Pacific Microsonics, Inc. in the United States and/or other countries.

HDCCD system manufactured under license from Pacific Microsonics, Inc. This product is covered by one or more of the following: In the USA: 5,479,168, 5,638,074, 5,640,161, 5,808,574, 5,838,274, 5,854,600, 5,864,311, 5,872,531, and in Australia: 669114, with other patents pending.

■ **Built-in decoders**

You can play discs with these symbols.



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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. Safety Precautions

1.1. GENERAL GUIDELINES

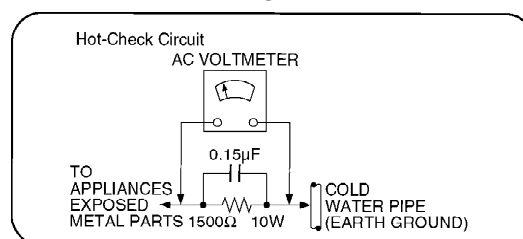
1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between $1M\ \Omega$ and $5.2M\ \Omega$. / When the exposed metal does not have a return path to the chassis, the

reading must be ∞ .

Figure 1



1.1.2. LEAKAGE CURRENT HOT CHECK (See [Figure 1](#) .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $1.5k\ \Omega$, 10 watts resistor, in parallel with a $0.15\ \mu F$ capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in [Figure 1](#).

3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

2. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
Caution
Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by Δ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C546~C549 through a 10 Ω , 10 W resistor to ground.

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent. Current consumption at AC 120 V, 60 Hz in NO SIGNAL mode should be ~ 650 mA.

4. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are

“shorted”, or if speaker systems with an impedance less than the indicated rated impedance of

the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

5. Precaution of Laser Diode

ON :

This product utilizes a class 1 laser. Invisible laser radiation is emitted from the optical pick up lens.

When the unit is turned on:

Wavelength : 662nm/(DVD)785nm(CD)

Maximum output radiation power from pick up : 100 μ W/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

CAUTION	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class II
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.	IEC60825-1 / Class 3b
VARNING	- SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN	
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDSKÅ UDSELS- TILFÆLLE FOR STRÅLING.	
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DOKKEL ÄPPNAS. UNNGÅ EKSPONERING FÖR STRÅLEN	
VARO!	- AVATTARESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSTRÄHKYLLE. ÄLÄ KATSO SÄTEPESSEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHLE AUSSETZEN.	
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FASCEAU.	
注意	- 点検時、点検可能なレーザー光線が射出します。	
注意	- レーザー光線が射出します。レーザー光線に長時間、直接照射しないでください。	RQ1X30264

(Inside of product)

CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

6. About Lead Free Solder (PbF)

Distinction of PbF PCB: PCBs (manufactured) using lead free solder will have a Pbf stamp on

the PCB.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).

When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

7. General Description

7.1. Operating instructions

7.2. Disc information

Tips for making WMA/MP3 and JPEG discs (For CD-R, CD-RW)

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.
- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files

(Files are treated as content and folders are treated as groups on this unit.)

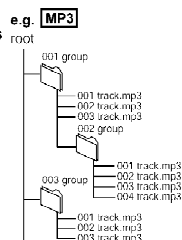
At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).

Files must have the extension:

“.WMA” or “.wma”

“.MP3” or “.mp3”

“.JPG”, “.jpg”, “.JPEG” or “.jpeg”



WMA

- You cannot play WMA files that are copy protected.
- This unit does not support Multiple Bit Rate (MBR).

MP3

This unit does not support ID3 tags.

Compatible sampling rates: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz.

JPEG

- To view JPEG files on this unit:
 - Take them on a digital camera that meets the DCF Standard (Design rule for Camera File system) Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture un-viewable.
 - Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play pictures with attached audio.

7.3. About HighMAT

7.3.1. What's HighMAT?

Consumers worldwide are using PCs to create their own collections of music, photos and even video by burning them onto CDs. But how these collections can be experienced across different devices can be confusing to navigate, time consuming to access for a DVD player, and be incomplete in terms of music information available to the customer.

HighMAT offers a solution to this growing consumer problem. HighMAT dramatically improves the digital media experience on consumer electronic devices by delivering a simple, standardized approach that allows consumers who have created personal collections of digital music, photography and video on their PC to:

>> Create a HighMAT CD or DVD which can be easily played back on consumer electronics devices such as CD and DVD players, and car stereos.

>> Move digital media files (using recordable media such as CD-R and CD-RW) between the PC

and various playback devices such as CD and DVD players.

A new standard for creating personal media on consumer electronic devices, HighMAT enable easier and more seamless interoperability between Windows PCs and devices designed for your living room, or the car.



HighMAT is a new technology which has been co-developed and is supported by Microsoft Corporation and Matsushita Electric Industrial Co., Ltd. (Panasonic). HighMAT stands for High-Performance Media Access Technology. Look for the HighMAT logo on electronics devices - there are three levels of playback support for consumer electronics devices.

► [HighMAT Official Website](#)



HighMAT Audio

Products which display this logo are able to play back HighMAT audio content only (WMA, MP3)



HighMAT Audio and Image

Products which display this logo are able to play back HighMAT audio content (WMA, MP3) and still pictures (JPEG) only



HighMAT Audio, Image and Video

Products which display this logo are able to play back all three types of HighMAT content: Audio (WMA, MP3), still pictures (JPEG) and video (WMV, MPEG-4※)

※MPEG-4: support is optional

7.3.2. Why take advantage of HighMAT?

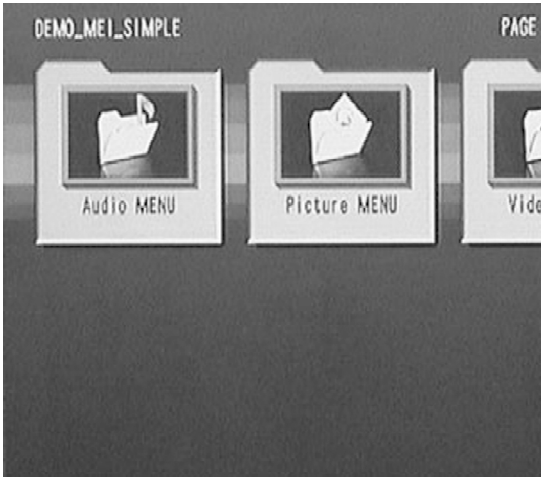
A Problem Defined: Today, when consumers create their own digital audio, video or photo collections on CD-R or other physical formats, there are numerous, inconsistent ways that devices read the data. For the consumer, the playback experience can be confusing:

- Many consumer electronics devices do not support playlists or advanced playback options such as the ability to access content by date or genre.
- The user interface for accessing the media and any associated information (including playlists, folders, music metadata and more) may vary between different devices.
- Large collections of music, videos or photos may take several minutes for a CD or DVD player to read.
- Discs may be unplayable because the compressed media format is not supported by the playback device or the disc layout is incompatible.

A Solution Created: HighMAT delivers a better digital media access experience by creating a standard approach for PCs to structure digital media on various physical formats and for playback devices to read the data.

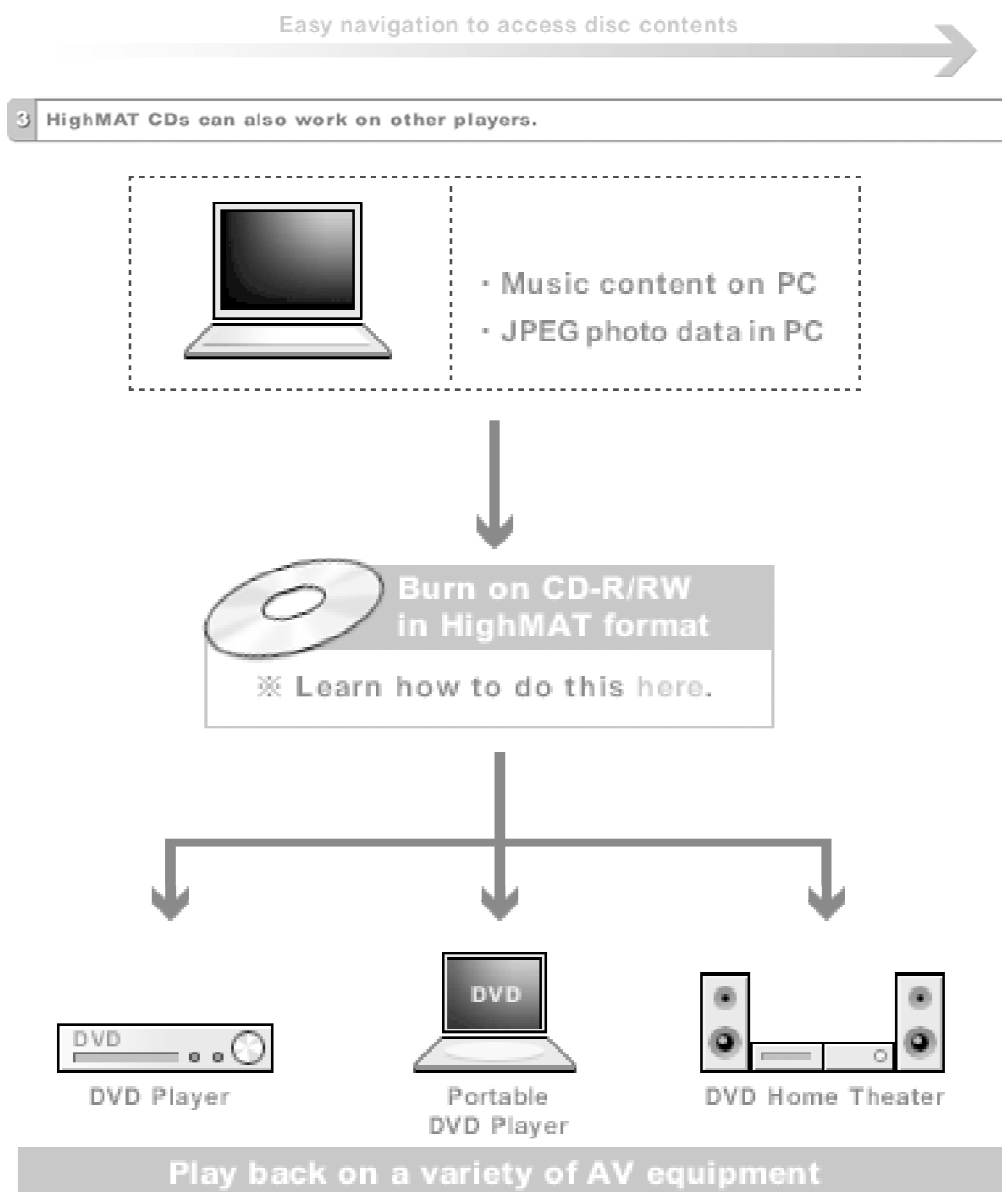
7.3.3. Benefits of HighMAT?

- 1 Creating a HighMAT CD makes it easier to navigate different types of media you want to burn onto a CD (Photos, Music).

Conventional	HighMAT
Even though DVD player is CD-R/RW compatible, the inconsistent ways that various DVD players can read the music or photos files often leads to a confusing and inconsistent playback experience. 	HighMAT compatible products play content with consistent interface. This includes products which are JPEG compatible products with HighMAT support. 

- 2 Eliminates compatibility issues and delivers better more consistent access to more music information like artist, song name, genre and photo information (metadata) as well as provide faster access to large amounts of music and photo files burned on CDs.





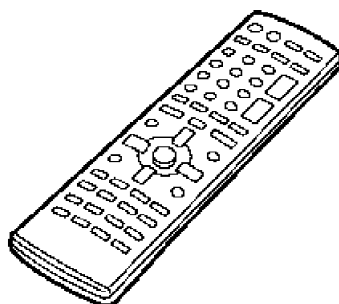
HighMAT is now available for CD Burning and in leading DVD Players. / HighMAT is a new technology that is now available in leading software and consumer electronic devices to dramatically improve the digital media experience when you create homemade CDs / HighMAT delivers a simple, standardized way for PC software and consumer electronics devices to talk to each other and work better together.

When you create your homemade CDs with software that supports HighMAT CD burning, and then play them back on a DVD player that supports HighMAT, you get better, easier navigation. You get folders you can access with a single click of your DVD player's remote control. You can view important information about your music like full song names, artist titles, album names and genre. And you can get faster startup on your home entertainment device.

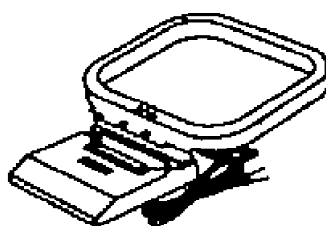
To enjoy the benefits of HighMAT, all you need is software that supports HighMAT for CD burning of music or photos, as well as a home entertainment device like a DVD player that supports HighMAT for playback. Always look for the HighMAT logo on your software or home entertainment device to ensure it supports the HighMAT experience.

8. Accessories

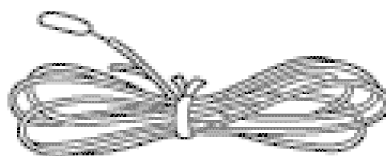
Remote control



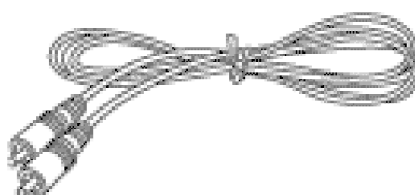
AM loop antenna



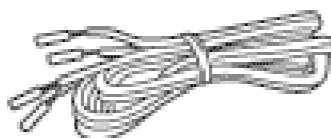
FM indoor antenna



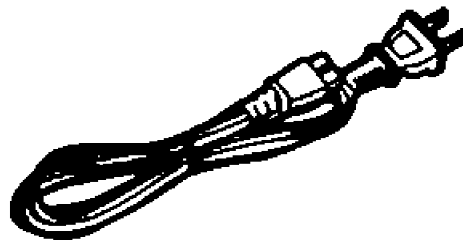
Video Cable



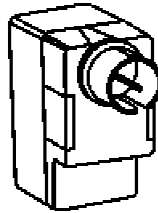
Speaker cables



AC cord



Antenna plug



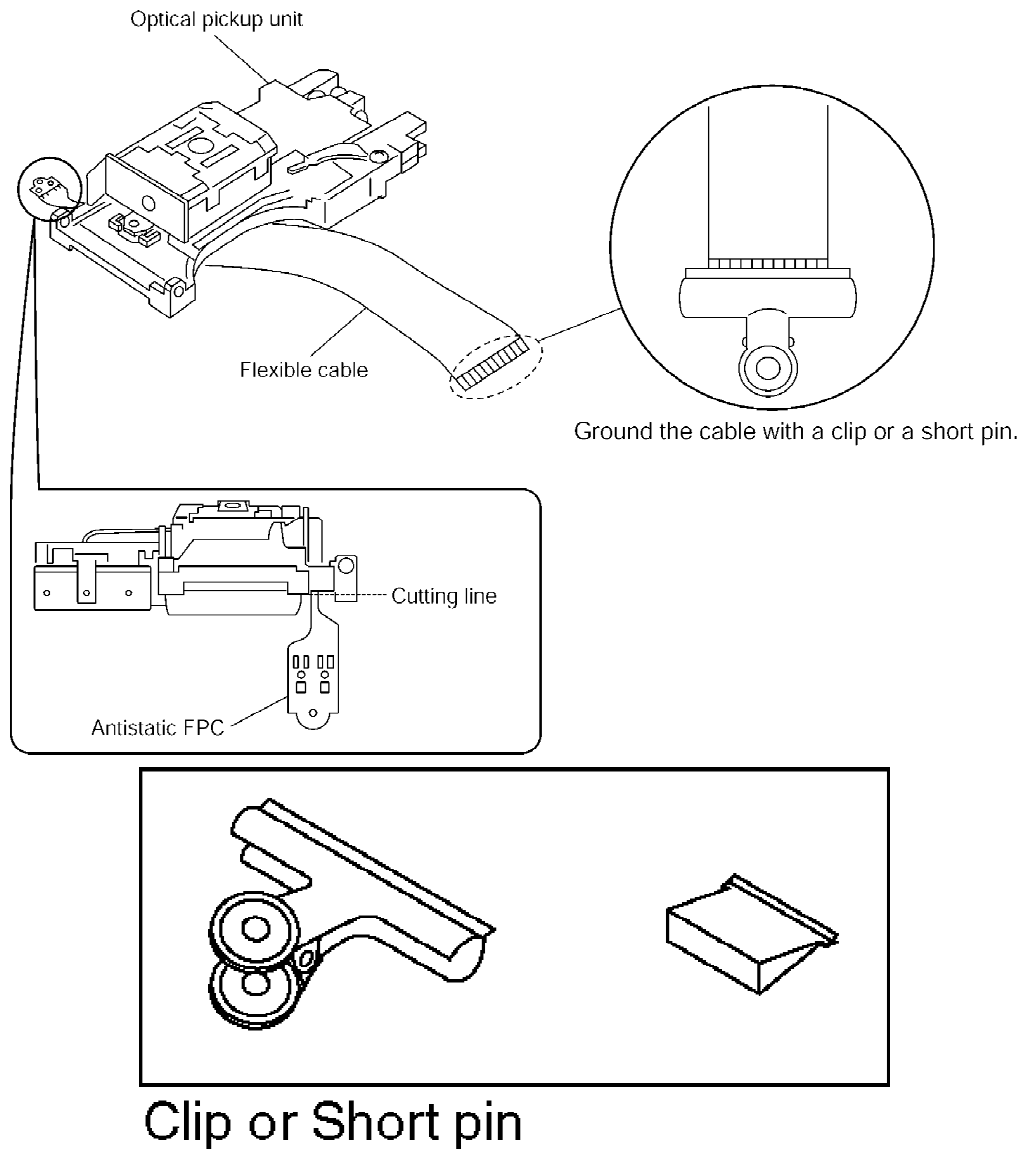
9. Handling Precautions for Optical Pickup Unit

The laser diode in the optical pickup unit may break down due to static electricity of clothes or human body. Special care must be taken avoid to electrostatic breakdown when servicing and handling the laser diode.

9.1. Cautions to Be Taken in Handling the Optical Pickup Unit

The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid to electrostatic discharge damage when servicing the laser diode.

- 1. Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.**
- 2. To prevent the laser diode from the electrostatic discharge damage, the flexible cable of the optical pickup unit removed from the PCB should be short-circuited with a short pin or a clip.**
- 3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the flexible cable.**
- 4. The antistatic FPC is connected to the new optical pickup unit. After replacing the optical pickup unit and connecting the flexible cable, cut off the antistatic FPC.**



9.2. Cautions to Be Taken When Replacing the Optical Pickup

The flexible cable of the optical pickup unit which was supplied as a component is equipped with a short clip to prevent the laser diode from being damaged due to electrostatic discharge. Remove the short clip before connecting the flexible cable and make sure that the short land is open. (If the flexible cable is short-circuited, remove the solder.)

9.3. Grounding for electrostatic breakdown prevention

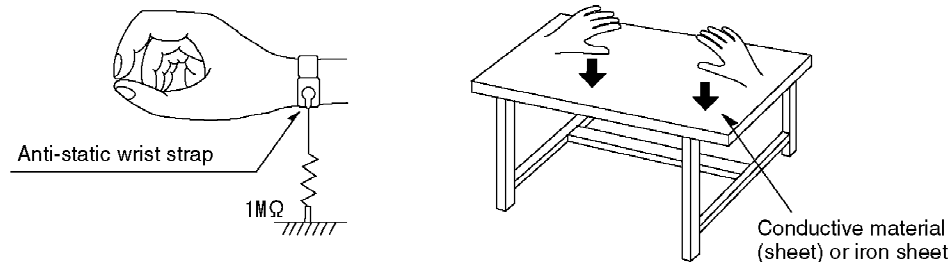
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

9.3.1. Worktable grounding

1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

9.3.2. Human body grounding

1. Use the anti-static wrist strap to discharge the static electricity from your body.



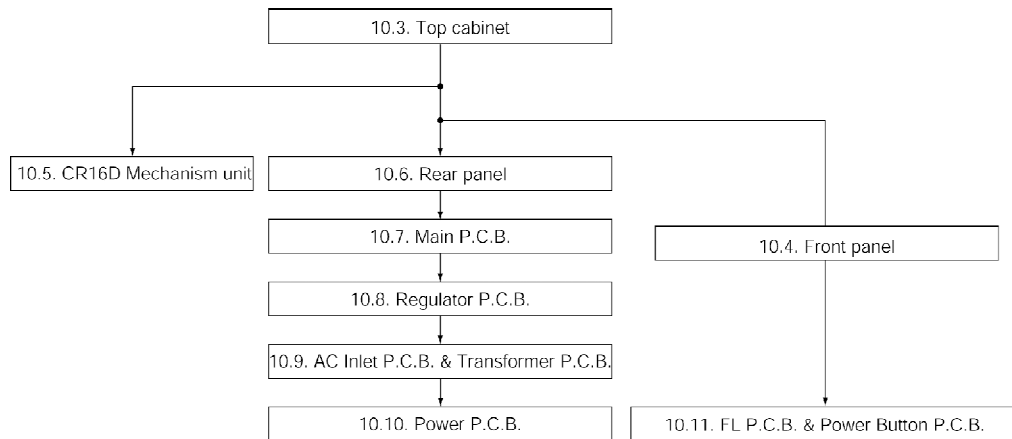
10. Disassembly Main Component Replacement Procedure

“ATTENTION SERVICER”

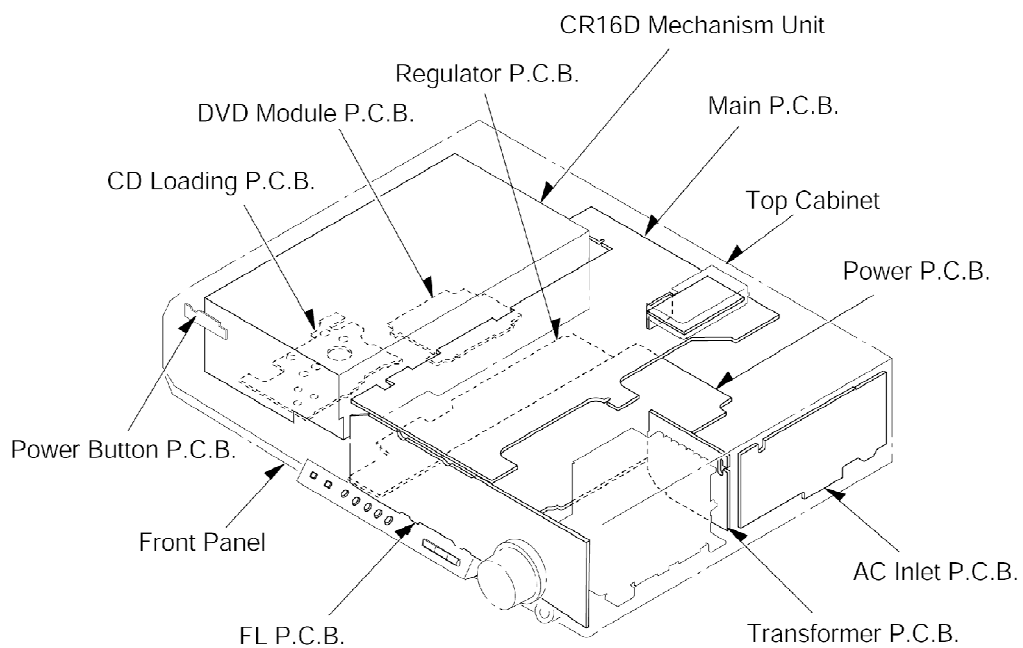
Some chassis components may have sharp edges.
Be careful when disassembling and servicing.

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For assembly after operation checks or replacement, reverse the respective procedures.
Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
 - Disassembling the Top Cabinet
 - Disassembling the Front Panel
 - Disassembling the CR16D Mechanism Unit
 - Disassembling of Rear panel
 - Disassembling the Main P.C.B.
 - Disassemble of Regulator P.C.B.
 - Disassemble of AC Intel P.C.B.
 - Disassemble of Power P.C.B.
 - Disassemble of FL P.C.B. & Power Button P.C.B.

10.1. Disassembly Procedure

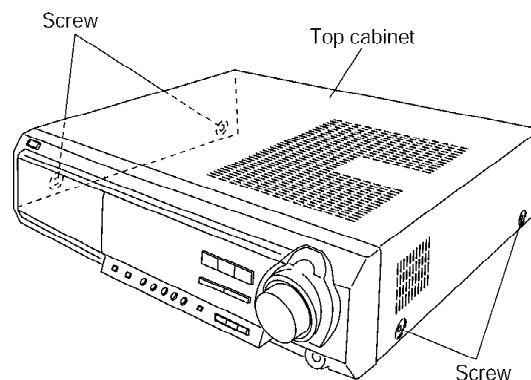


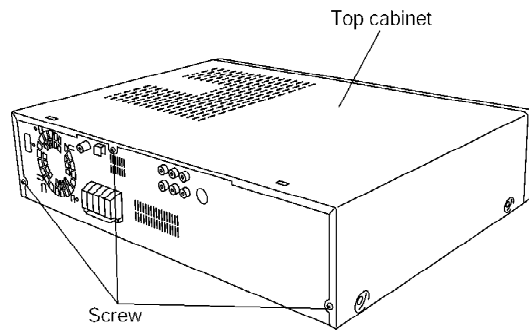
10.2. Main Components and P.C.B. Locations



10.3. Disassemble Top Cabinet

Step 1 Unscrew the screws.



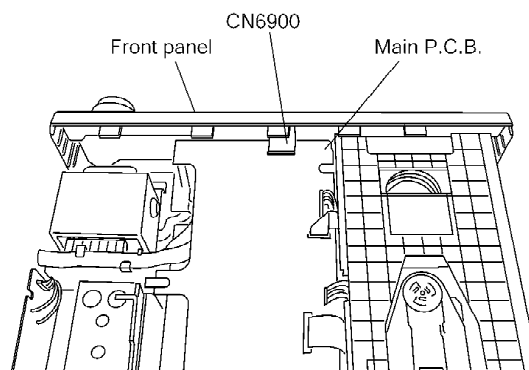


Step 2 Lift up & remove the top cabinet.

10.4. Disassemble Front Panel

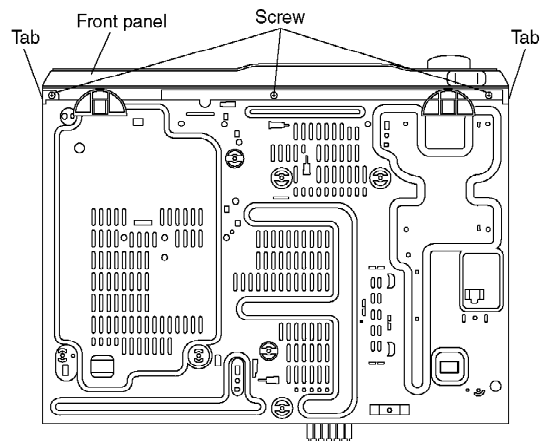
- Follow the (Step 1) - (Step 2) of Item 10.3.

Step 1 Detach FFC at connector. (CN6900)



Step 2 Unscrew the screws.

Step 3 Release the tabs.



Step 4 Remove front panel.

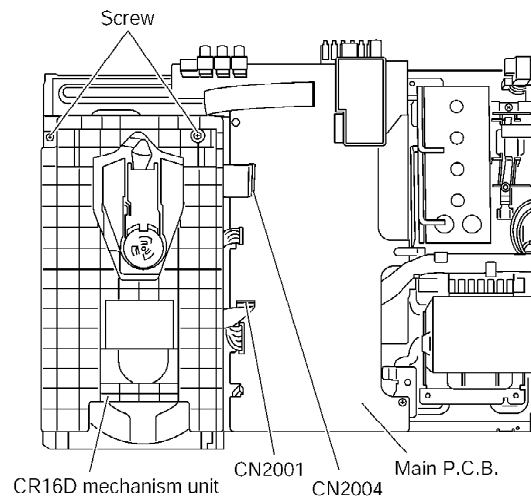
10.5. Disassemble CR16D Mechanism Unit

- Follow the (Step 1) - (Step 2) of Item 10.3.

Step 1 Unscrew the screws.

Step 2 Detach FFC cable at connectors. (CN2001, CN2004)

Step 3 Lift the CR16D mechanism unit vertically.

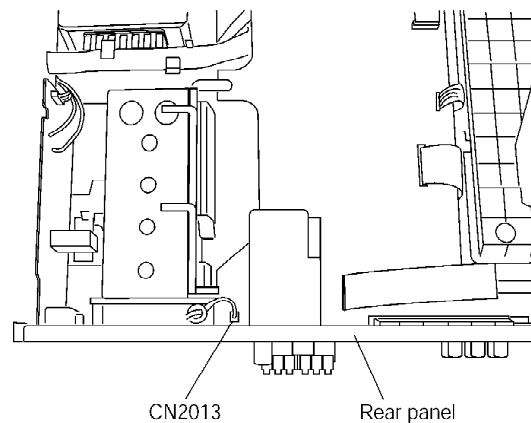


- Note : Refer to section 11 for disassembly of the mechanism unit.

10.6. Disassemble Rear panel

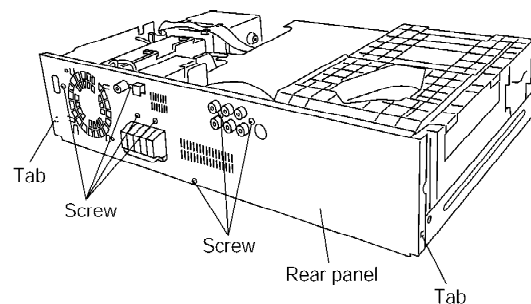
- Follow the (Step 1) - (Step 2) of Item 10.3.

Step 1 Detach wire at the connector. (CN2013)



Step 2 Unscrew the screws.

Step 3 Release the tabs.



Step 4 Remove rear panel.

10.7. Disassemble Main P.C.B.

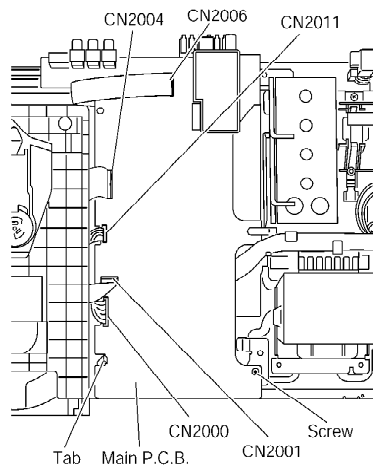
- Follow the (Step 1) - (Step 2) of Item 10.3.

- Follow the (Step 1) - (Step 4) of Item 10.6.

Step 1 Unscrew the screws.

Step 2 Detach FFC/wire at the connectors. (CN2000, CN2001, CN2011, CN2004, CN2006)

Step 3 Release the tab.



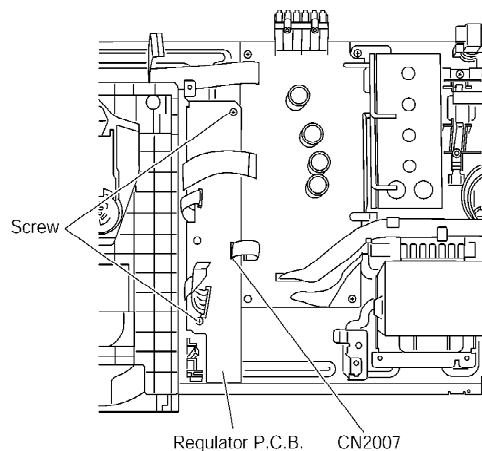
Step 4 Remove Main P.C.B..

10.8. Disassemble of Regulator P.C.B.

- Follow the (Step 1) - (Step 2) of Item 10.3.
- Follow the (Step 1) - (Step 4) of Item 10.6.
- Follow the (Step 1) - (Step 4) of Item 10.7.

Step 1 Unscrew the screws.

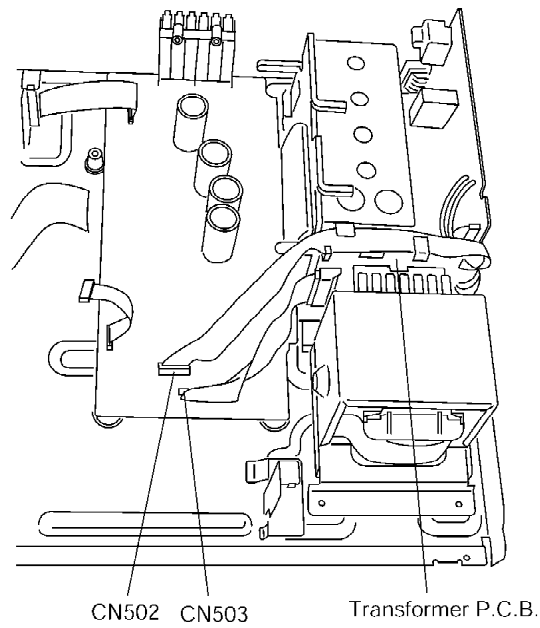
Step 2 Detach FFC at connector. (CN2007)



10.9. Disassemble of AC Inlet P.C.B. & Transformer P.C.B.

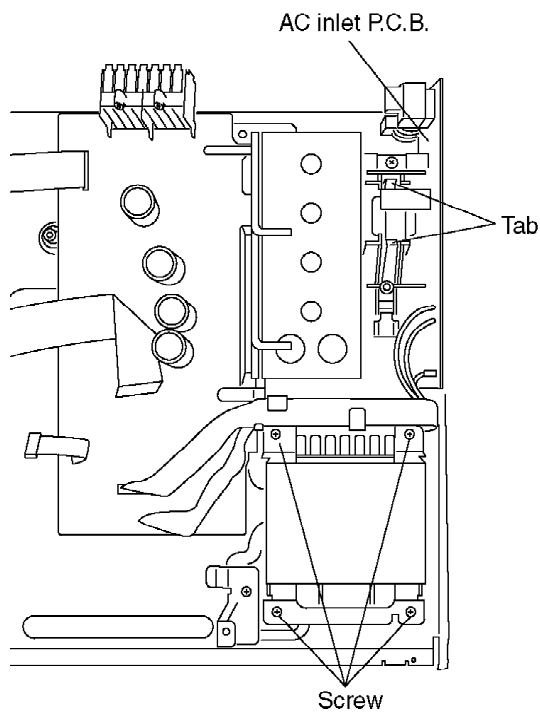
- Follow the (Step 1) - (Step 2) of Item 10.3.
- Follow the (Step 1) - (Step 4) of Item 10.6.
- Follow the (Step 1) - (Step 4) of Item 10.7.

Step 1 Detach FFC/wire at connectors. (CN502, CN503)



Step 2 Unscrew the screws.

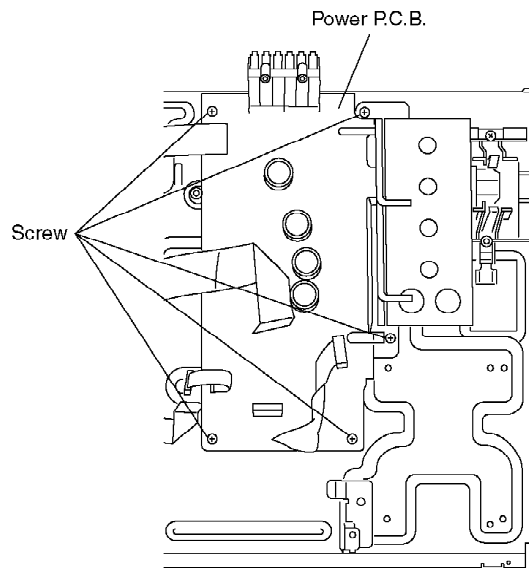
Step 3 Release the tabs.



10.10. Disassemble of Power P.C.B.

- Follow the (Step 1) - (Step 2) of Item 10.3.
- Follow the (Step 1) - (Step 4) of Item 10.6.
- Follow the (Step 1) - (Step 4) of Item 10.7.

Step 1 Unscrew the screws.

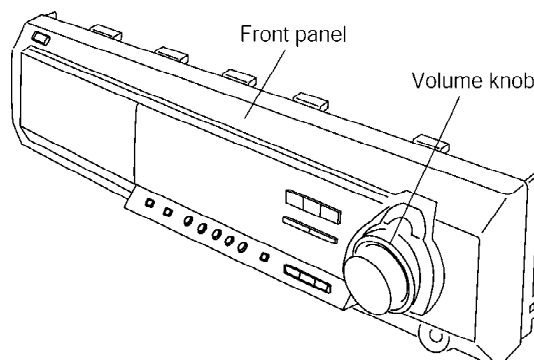


10.11. Disassemble FL P.C.B. & Power Button P.C.B.

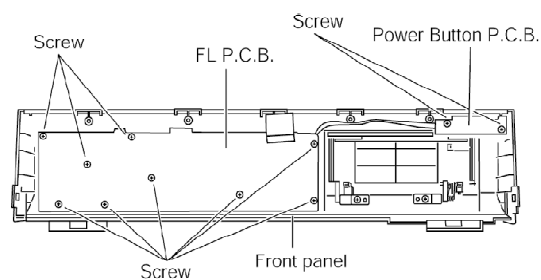
- Follow the (Step 1) - (Step 2) of Item 10.3.

- Follow the (Step 1) - (Step 4) of Item 10.4.

Step 1 Remove the volume knob.



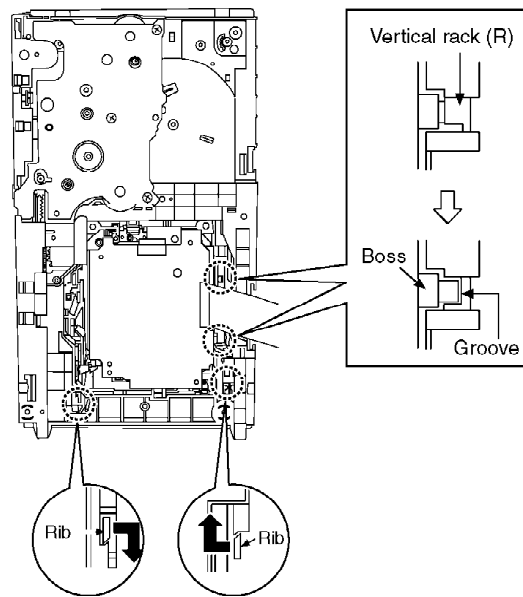
Step 2 Unscrew the screws.



Step 3 Lift up FL & Power Button P.C.B.

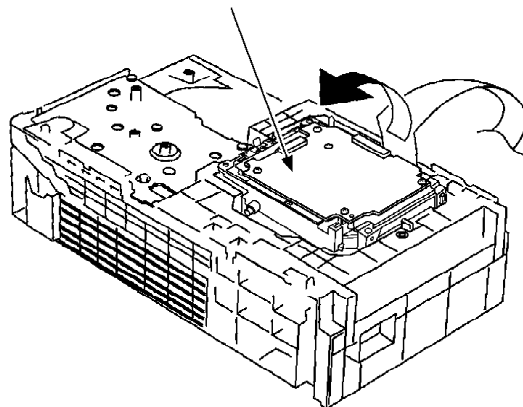
11. Assembling and Disassembling the Mechanism unit

11.1. Replacement for DVD traverse deck

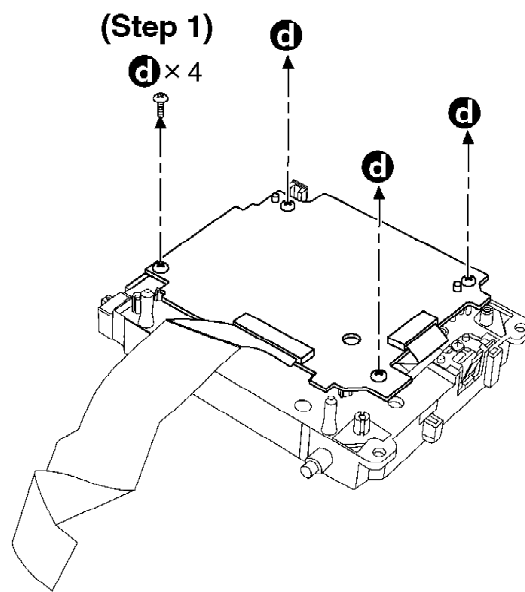


(Step 2)

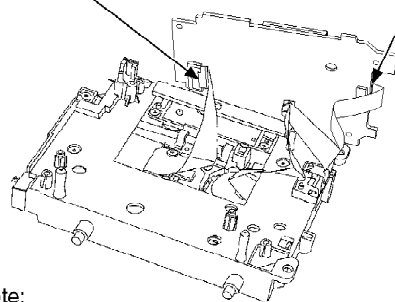
Remove DVD traverse deck
rotating to the arrow direction.



11.2. Replacement for optical pickup unit

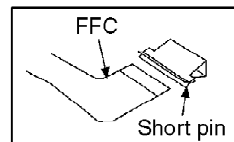


(Step 2)
Pull out FFC

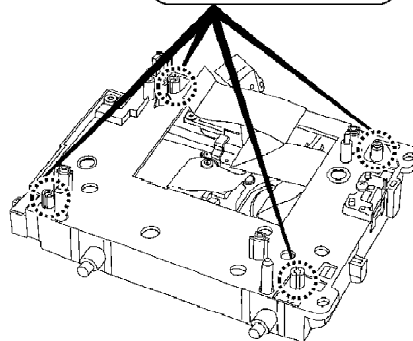
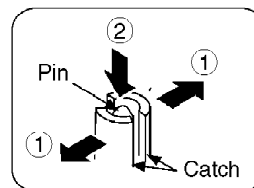


(Step 3)
Pull out FFC

Note:
Insert a short pin
into FFC of the
optical pickup.
[See "Notice on
handling of the
optical pickup"]

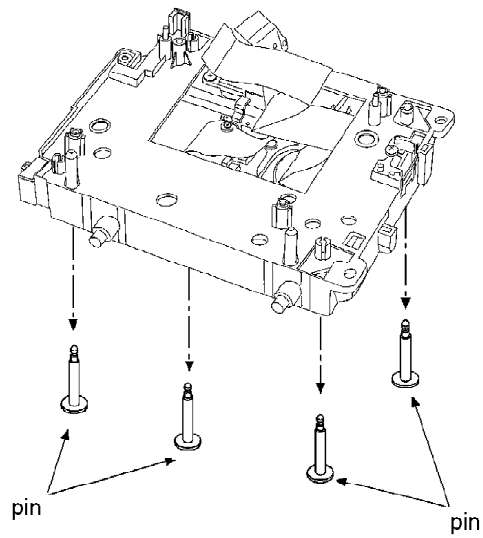


(Step 4)
Widening the catch,
push the pin in



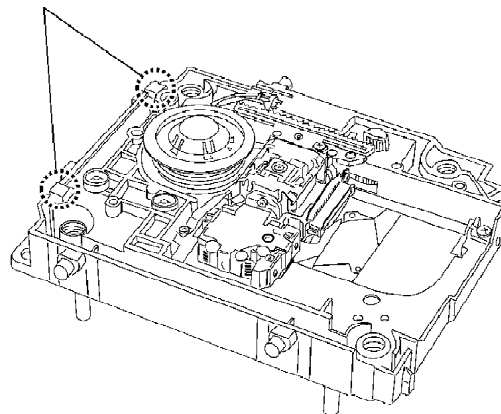
(Step 5)

Remove 4 pins



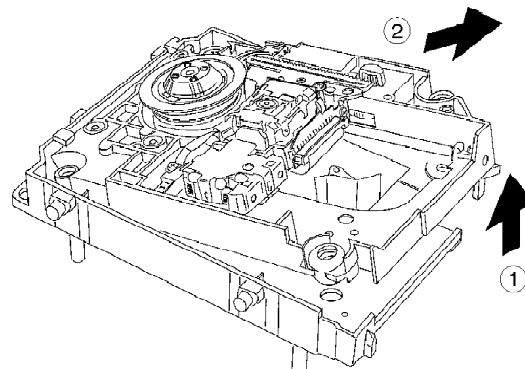
Note:

When removing the traverse deck unit,
it is careful of tow claw.



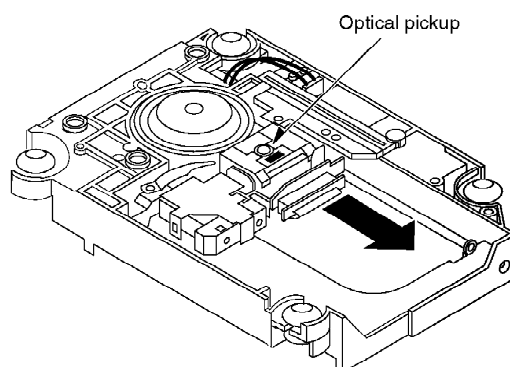
(Step 6)

Remove the traverse deck unit by
the order of the arrow.

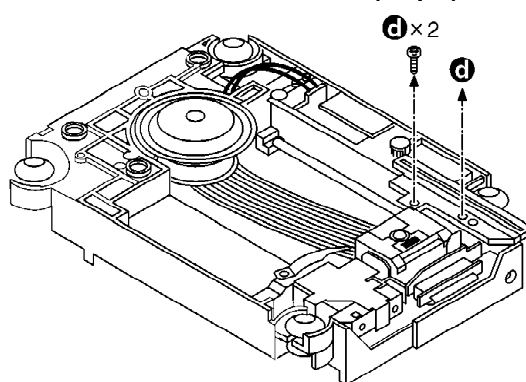


(Step 7)

It makes optical pickup move until it bumps against the direction of the arrow.

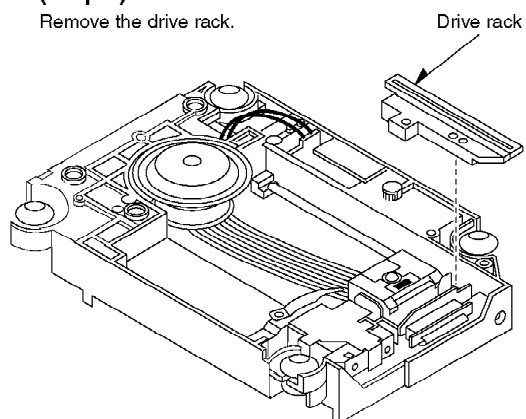


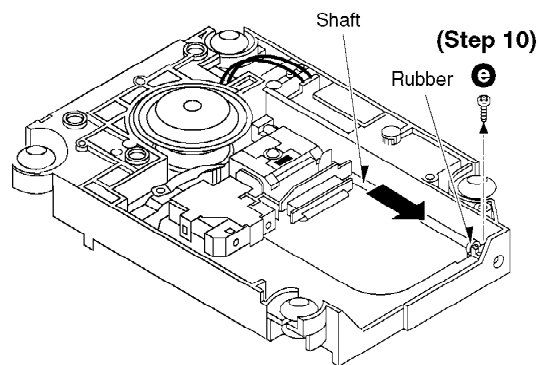
(Step 8)



(Step 9)

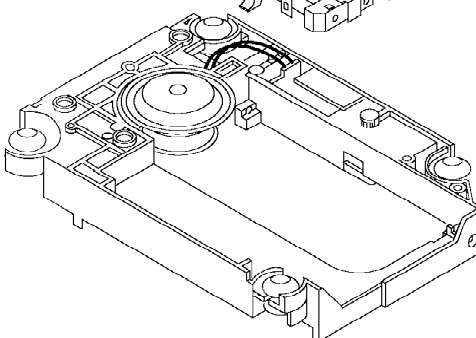
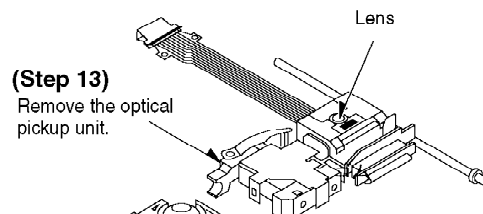
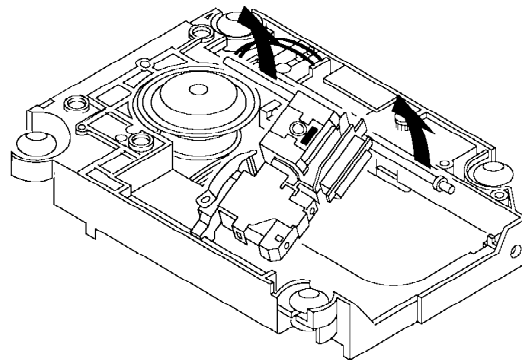
Remove the drive rack.





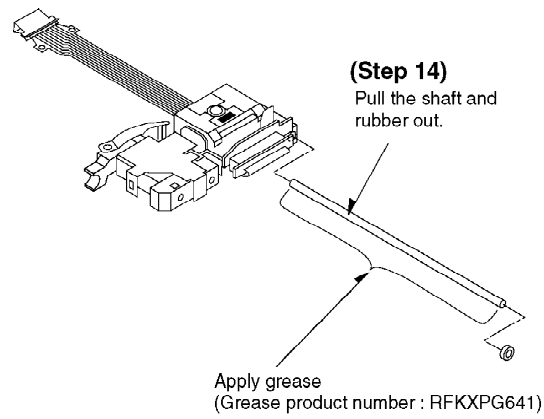
(Step 11)
Slide the shaft in the
arrow direction.

(Step 12)
Lift the optical pickup unit
with the shaft.



[Caution]

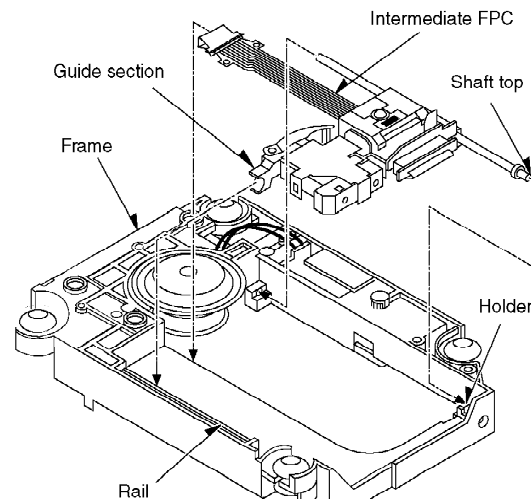
1. Do not give a considerable shock to the optical pickup unit as it has an extremely high-precision structure.
2. Do not touch the lens in the optical pickup unit.



< Assembling the optical pickup unit >

(Step 1)

Pass the intermediate FPC through the fram hole.



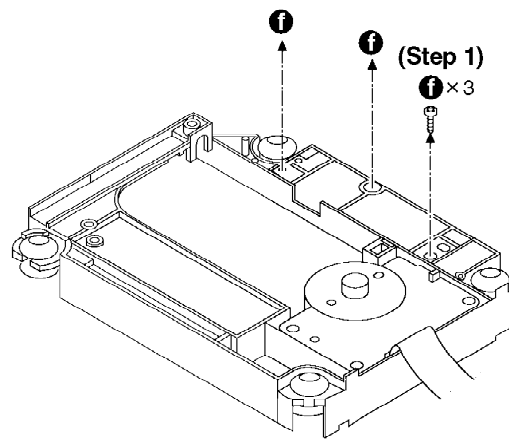
(Step 3)

Align the guide section of the optical pickup unit with the rail.

(Step 2)

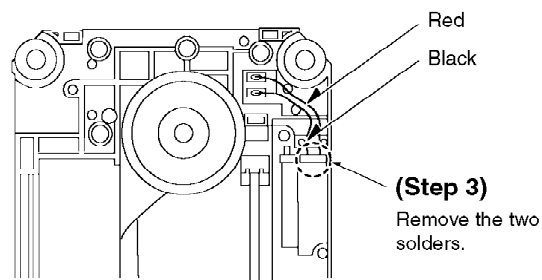
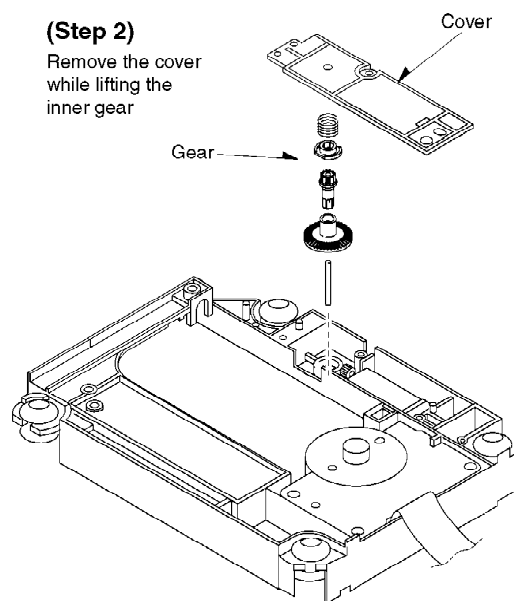
Install the shaft top the holder.

11.3. Assembling for traverse motor and spindle motor



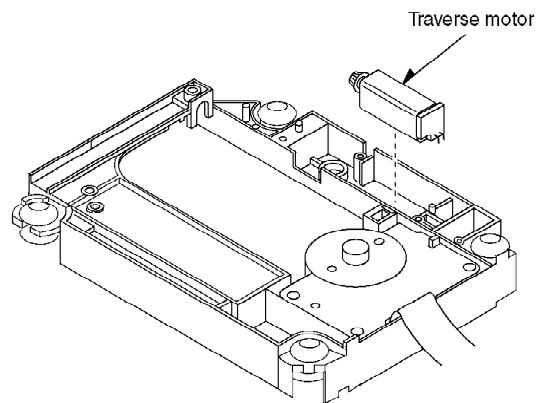
(Step 2)

Remove the cover while lifting the inner gear



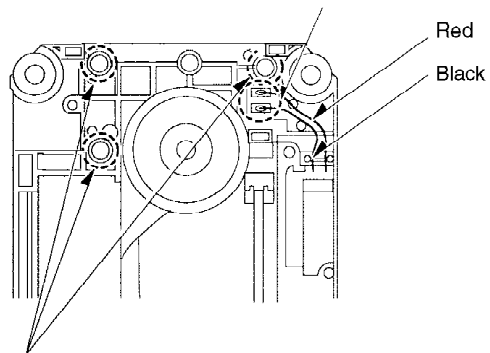
(Step 4)

Remove the traverse motor.



(Step 5)

Remove the two solder.

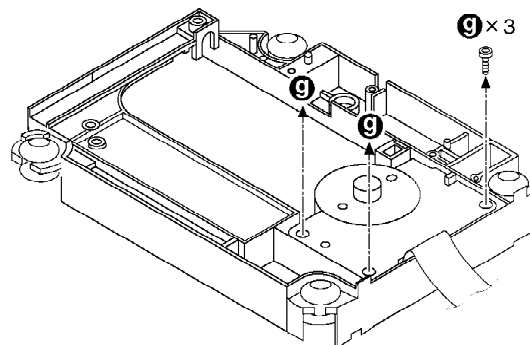


(Step 6)

Remove the three screw lock as carefully as you can.

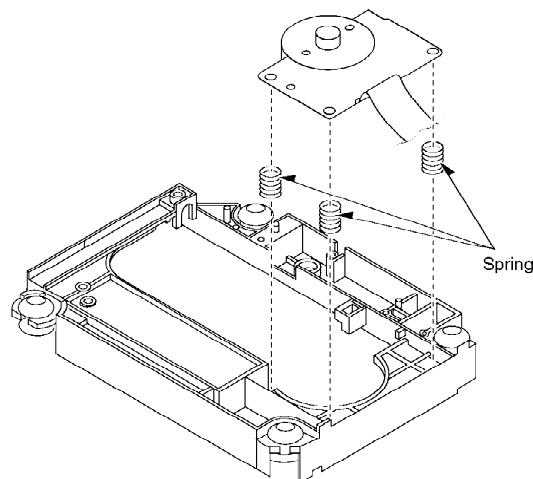
(Step 7)

Unscrew the three screws with torque screw driver (T6).



(Step 8)

Remove the spindle motor unit.



[Caution]

The three springs are removed at the same time when the spindle motor is removed. Do not misplace or lose them.

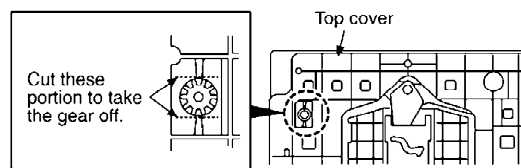
11.4. Procedure for removing CR16D mechanism unit

1. Turn off by pressing power SW in the body.
2. Unplug AC power cord after the indication of [GOOD-BYE], then disassemble the body.
3. Disassemble the body, and take out DVD loading mechanism.
4. Perform disassembly according to the following procedure for disassembly.

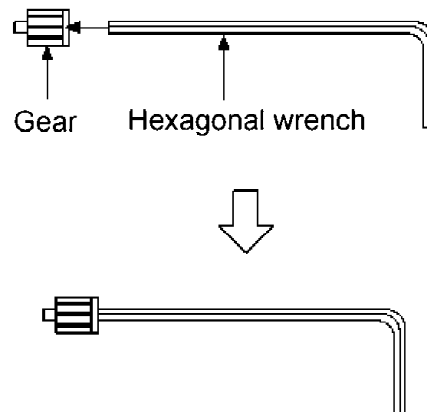
11.5. CR16 mechanism disassembly procedure

11.5.1. Gear for servicing information

- This unit has a gear which used for checking items (open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)
 - For preparation of gear (for servicing), perform the procedures as follows.
 - In case of re-servicing the same set, the “gear for servicing” may be took off because it had been used. So, the “gear for servicing” must be stored.
1. Remove the gear attached to top cover of DVD loading mechanism.



2. Insert the hexagonal wrench (2.5mm) into the gear.

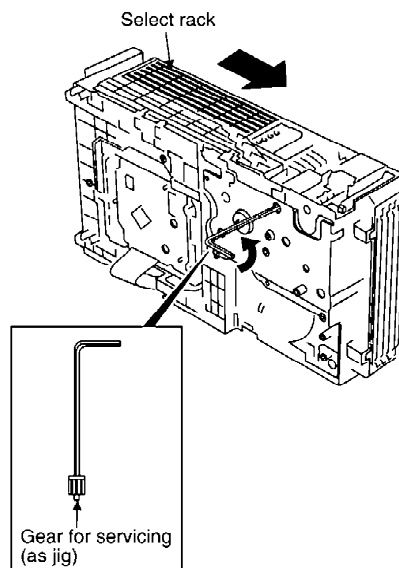


(Preparation of gear as jig is completed)

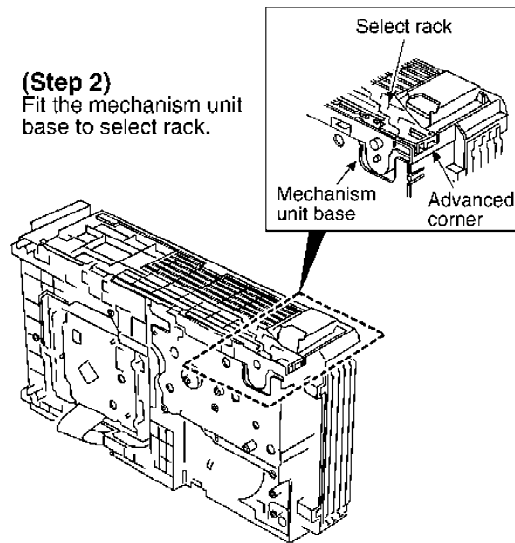
11.5.2. Replacement for the disc tray

(Step 1)

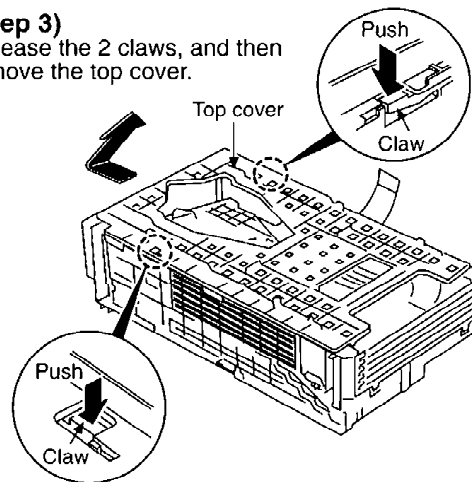
Rotate the gear for servicing and move the select rack to advanced corner.



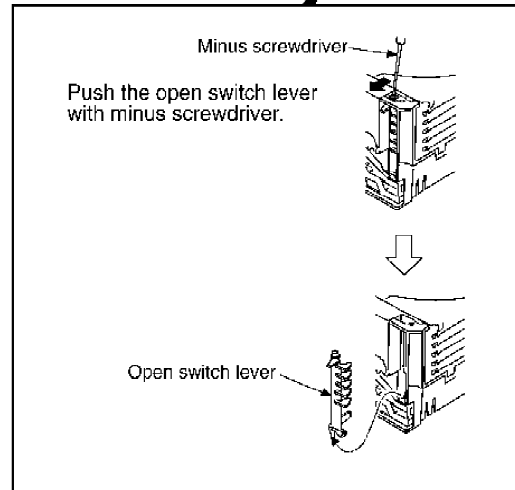
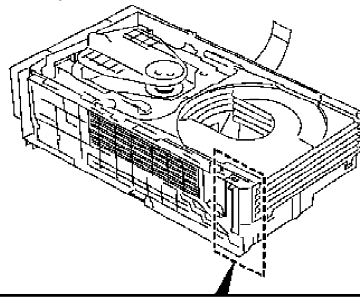
(Step 2)
Fit the mechanism unit
base to select rack.



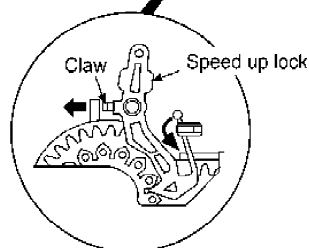
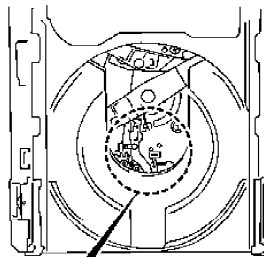
(Step 3)
Release the 2 claws, and then
remove the top cover.



(Step 4)
Remove the open switch lever.



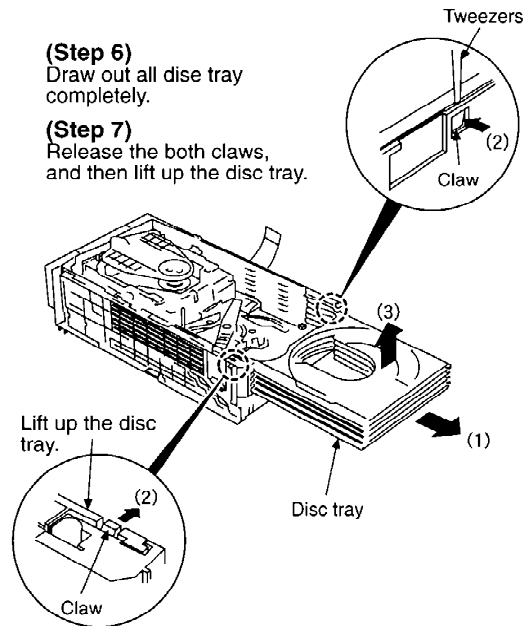
(Step 5)
Release the claw, and then remove the speed up lock.



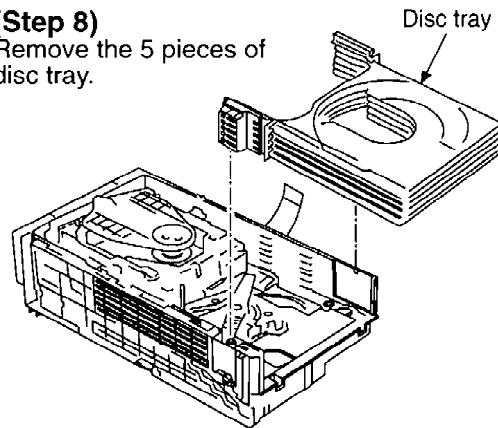
Insert the tweezers between the mechanism base and disc tray, and then lift up the disc tray.

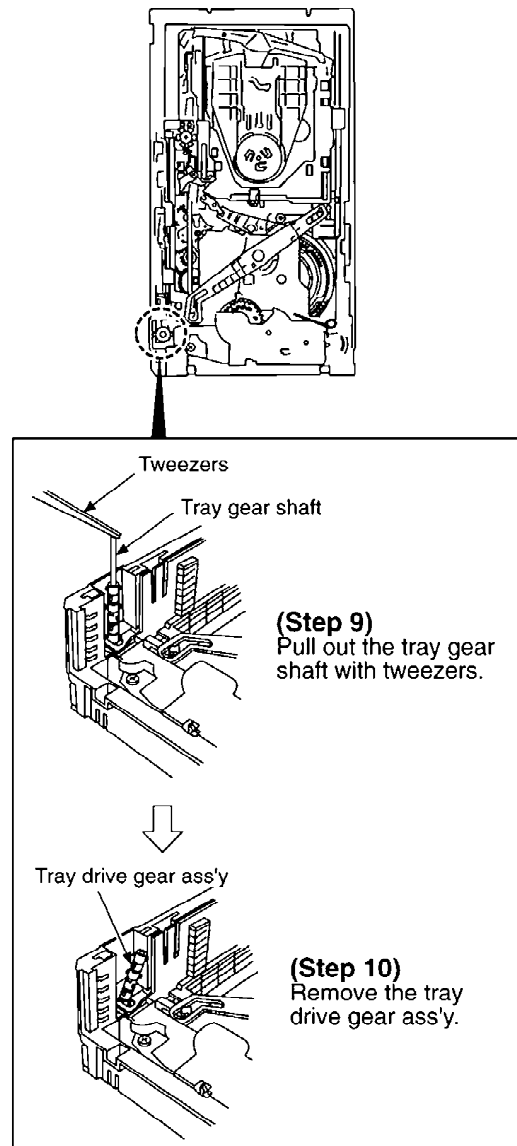
(Step 6)
Draw out all disc tray completely.

(Step 7)
Release the both claws, and then lift up the disc tray.



(Step 8)
Remove the 5 pieces of disc tray.





11.5.3. Replacement for the traverse deck

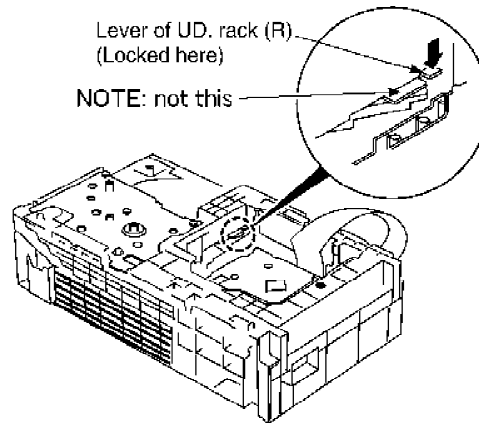
- Follow the (Step 1) - (Step 10) of item 11.5.2.

(Step 1)

Confirm the position for lever of UD. rack (R) to remove traverse unit.

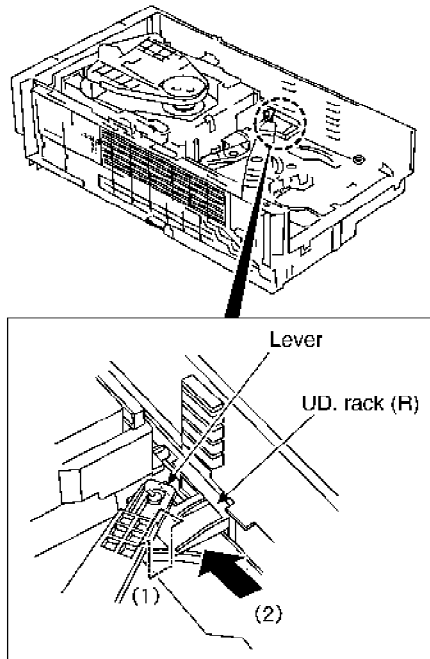
(Step 2)

Turn the unit over. (Upside: P.C.B.)

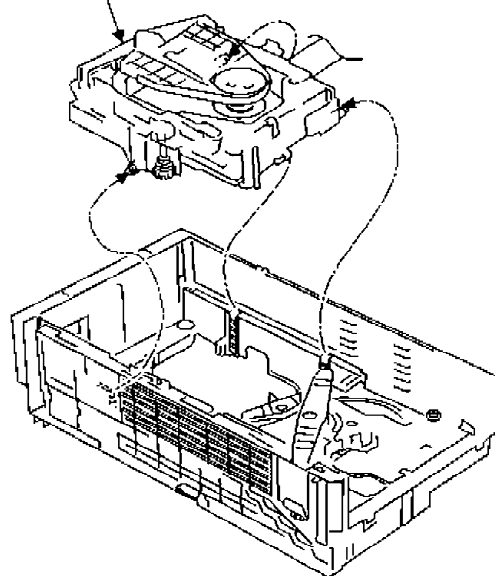


(Step 3)

Turn the unit over again, slide UD. rack (R) while pushing up the lever from the bottom.

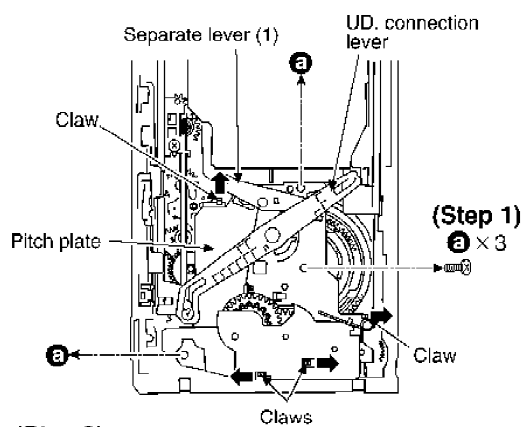


(Step 4)
Remove the traverse unit.



11.5.4. Disassembly for DVD loading unit

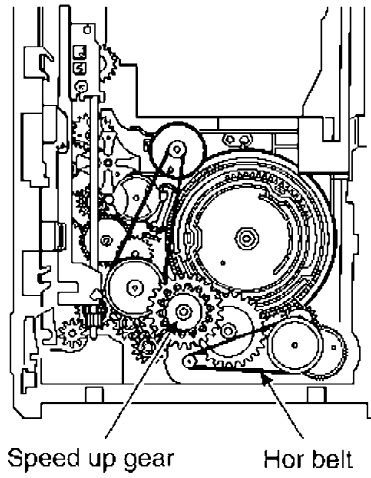
- Follow the (Step 1) - (Step 10) of item 11.5.2.
- Follow the (Step 1) - (Step 4) of item 11.5.3.



(Step 2)
Release the 4 claws, and then remove the pitch plate together with separate lever (1) and UD. connection lever.

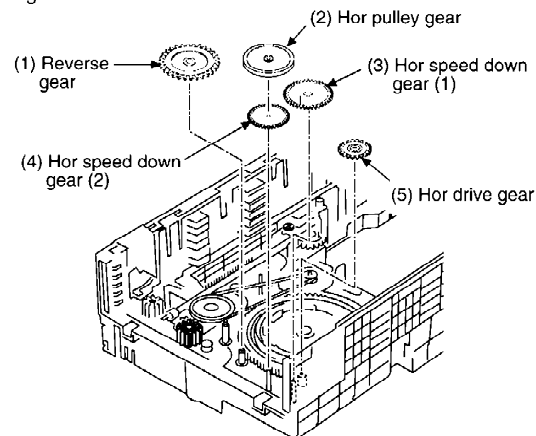
(Step 3)

Remove the speed up gear and hor belt.



(Step 4)

Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.

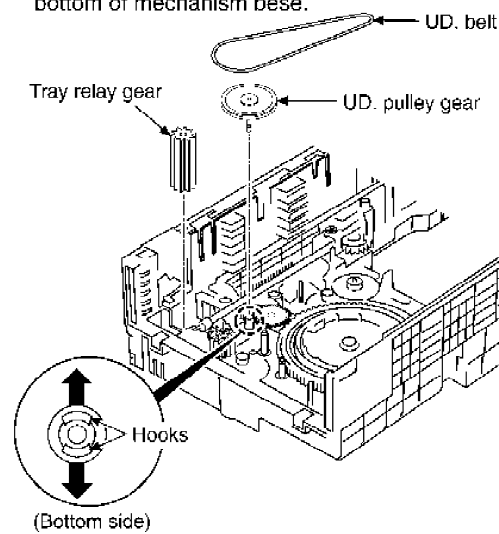


(Step 5)

Remove the UD. belt and tray relay gear.

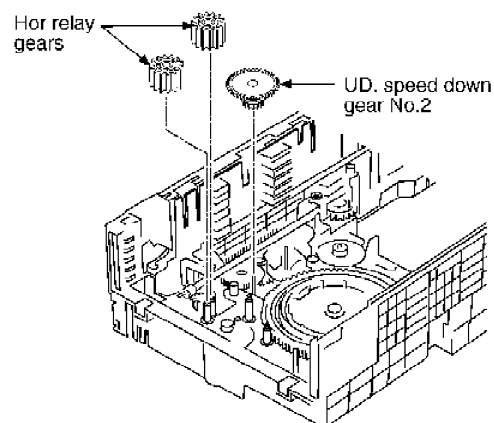
(Step 6)

Pull out the UD. pulley gear, loosen 2 hooks of the bottom of mechanism base.



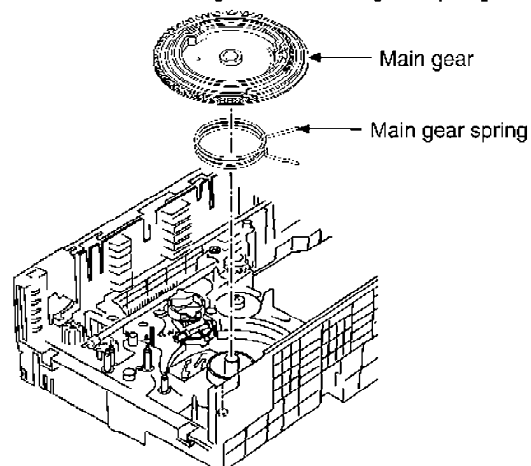
(Step 7)

Remove the 2 hor relay gears and UD. speed down gear No.2.



(Step 8)

Remove the main gear and main gear spring.

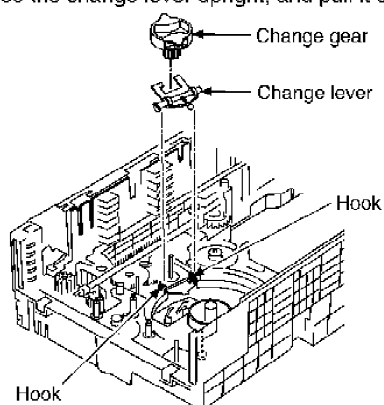


(Step 9)

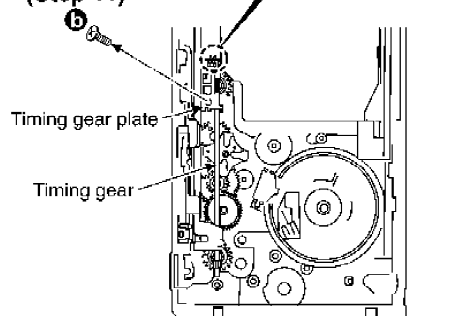
Remove the change gear.

(Step 10)

Raise the change lever upright, and pull it out of hook.



(Step 11)



(Step 12)

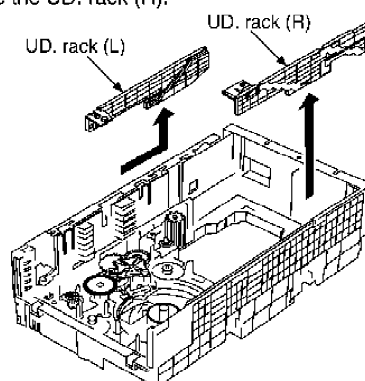
Release the 2 claws, and then remove the timing gear and timing gear plate.

(Step 13)

Move the UD. rack (L) to backward, and then remove it.

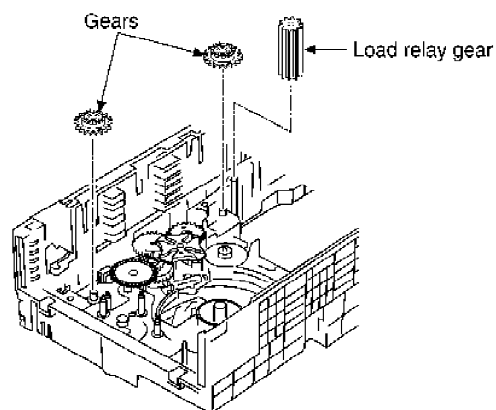
(Step 14)

Remove the UD. rack (R).



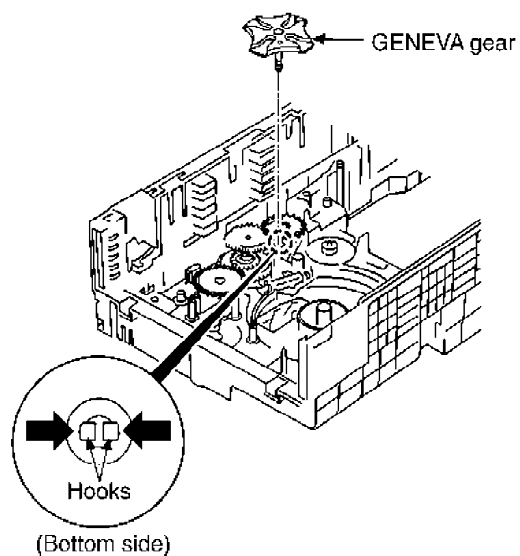
(Step 15)

Remove the 2 gears and load relay gear.



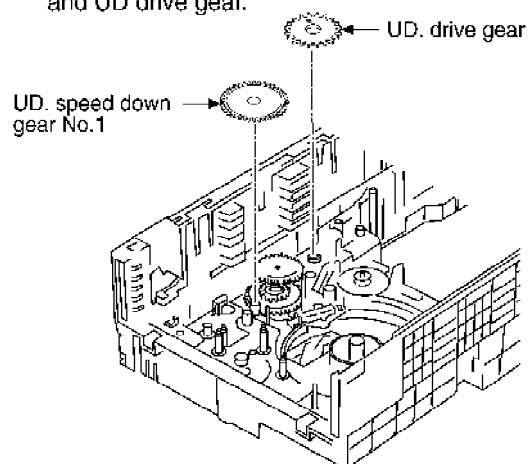
(Step 16)

Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.



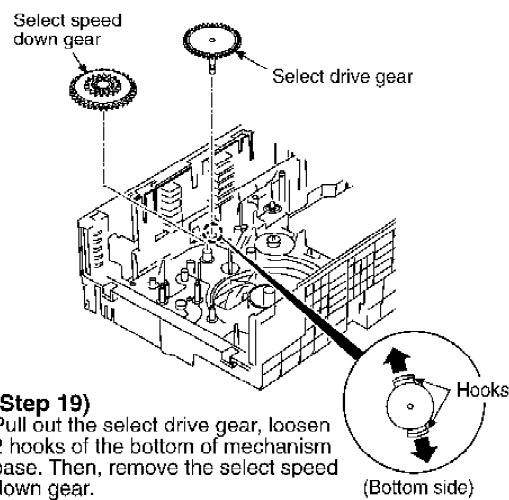
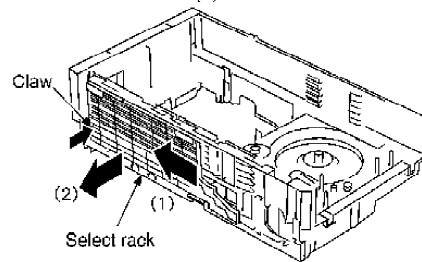
(Step 17)

Remove the UD. speed down gear No.1 and UD drive gear.



(Step 18)

Slide the select rack to the edge direction of the arrow (1). Push the claw and pull out to arrow (2) while sliding the select rack to the arrow (1).

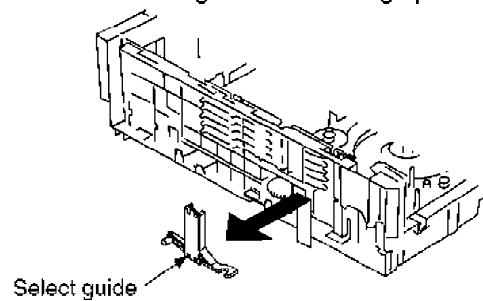


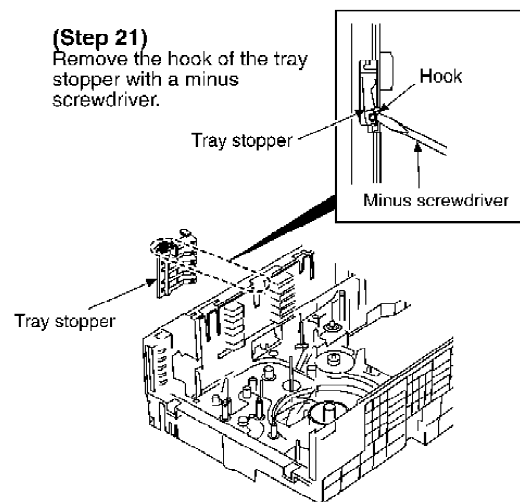
(Step 19)

Pull out the select drive gear, loosen 2 hooks of the bottom of mechanism base. Then, remove the select speed down gear.

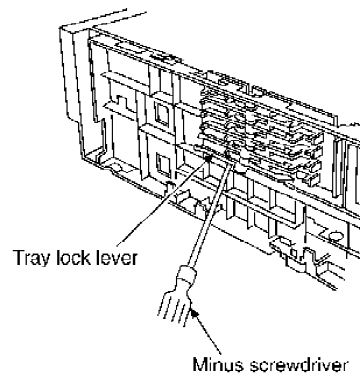
(Step 20)

Remove the select guide after sliding upside.





(Step 22)
Remove the bottom of the tray lock lever with a minus screwdriver and others.



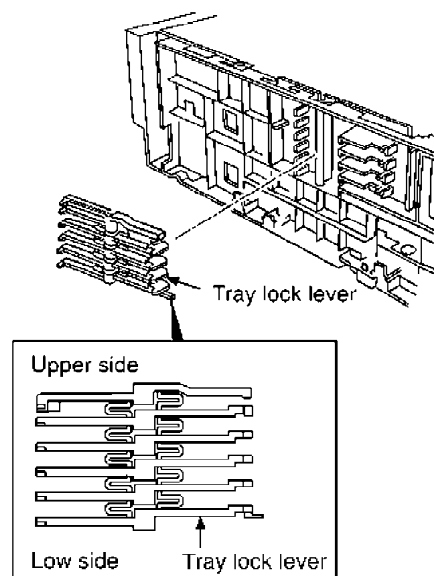
11.6. CR16 mechanism assembly procedure

The following specified greases and/or oil must be applied when some specific parts are changed.

1. Floil grease (VFK1298): The floil grease must be applied to tray, tray (L) and tray (R).
2. Hanarl oil (VFK1700): The hanarl oil must be applied to any parts with grease other than the said parts.

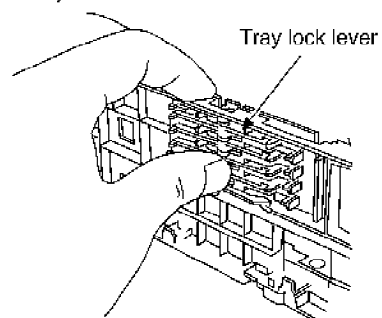
(Step 1)

Install the tray lock lever to mechanism base.



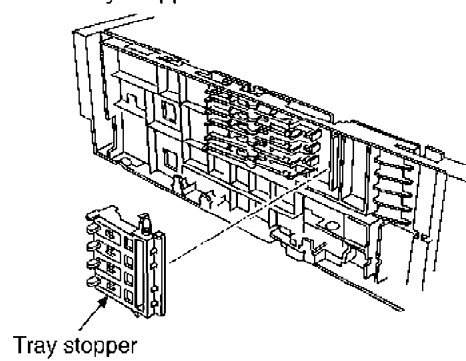
(Step 2)

Push the tray lock lever with a hand and install it.



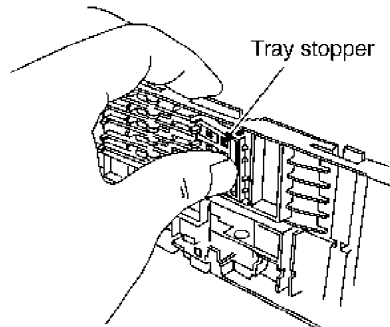
(Step 3)

Install the tray stopper to mechanism base.



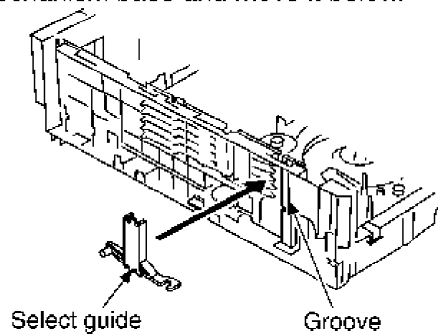
(Step 4)

Push the tray stopper with a hand and install it.



(Step 5)

Insert the select guide with a groove of the mechanism base and move it below.



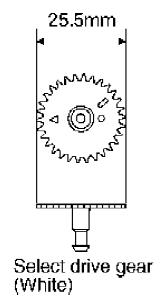
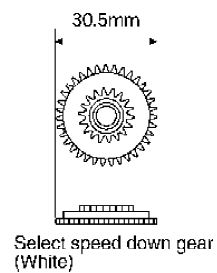
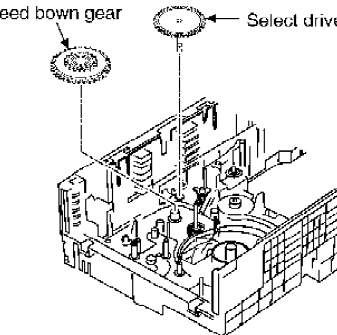
(Step 6)

Install the select speed down gear to mechanism base.

(Step 7)

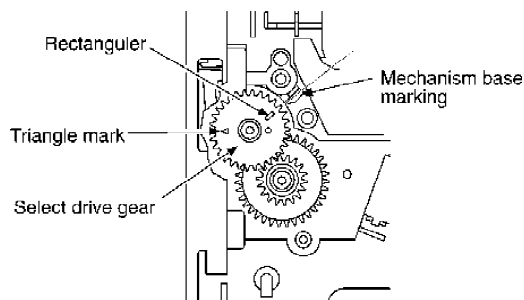
Install the select drive gear to mechanism base.

Select speed down gear Select drive gear



(Step 8)

Fit a mechanism base marking to the rectangular mark of gear so that the triangle mark can indicate the sideward direction.



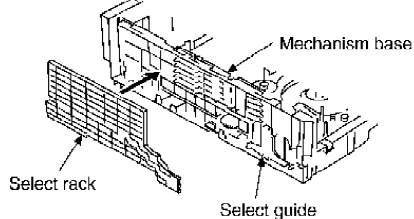
(Step 9)

Install the select rack to mechanism base.

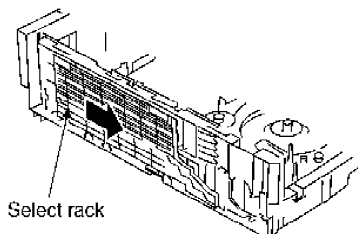
(Checking items before the installation.

1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position.(Rectangle/Triangular mark)(Refer to Step 8)

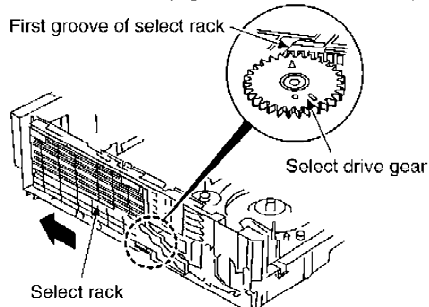
1. Put a select rack down with it fitted to its circumference of mechanism base.



2. Slide the select rack with it's pushing to a little right direction and install it.

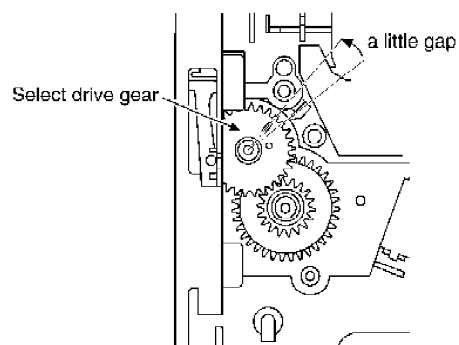


(Figure to see from the inside)



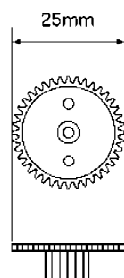
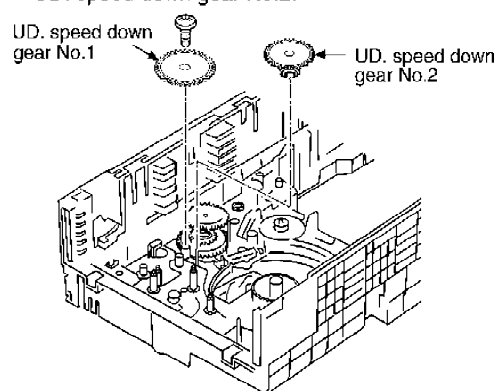
3. Check whether its end of triangular mark is in first groove of select rack, after fixing.
4. After insertion of select rack, continue the following work until the indication that it gose forward. And, all the while it must be checked that select rack is in the extreme end.

5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.

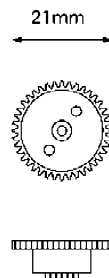


(Step 10)

Install the UD. speed down gear No.1 and UD. speed down gear No.2.



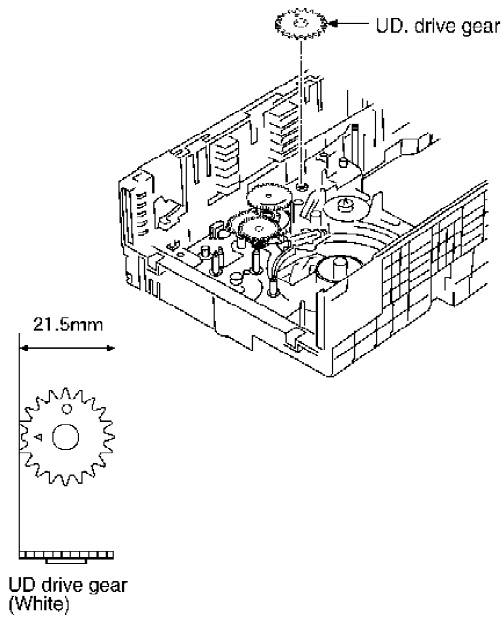
UD. speed down gear No.1
(White)



UD. speed down gear No.2
(Semi-transparent)

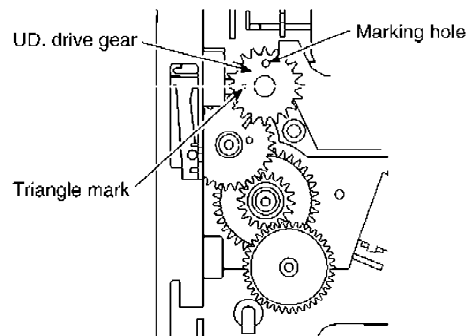
(Step 11)

Install the UD. drive gear to mechanism base.



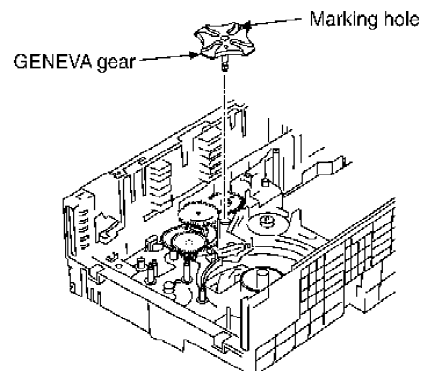
(Step 12)

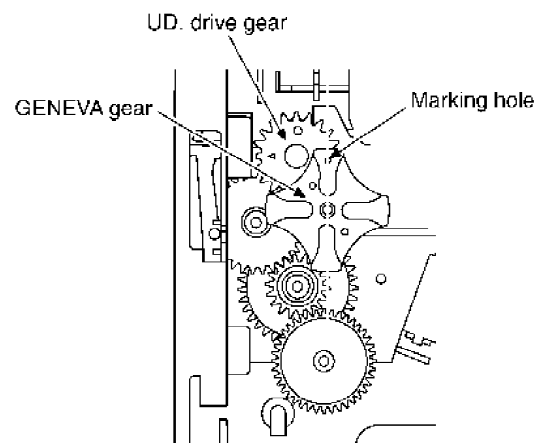
Insert the UD. drive gear with its marking hole upward. At that time, its triangle mark should be sideways.



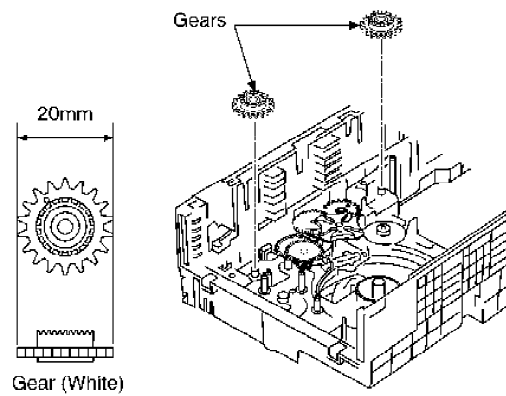
(Step 13)

Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base. At that time, UD. drive gear mustn't be moved.

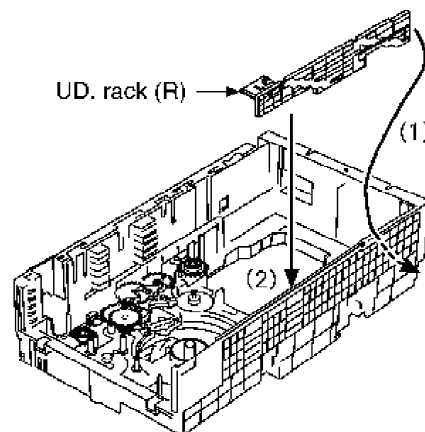




(Step 14)
Install the 2 gears to mechanism base.

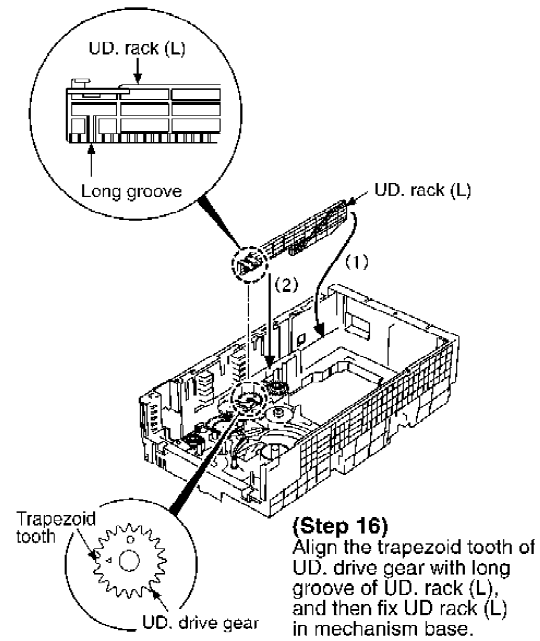
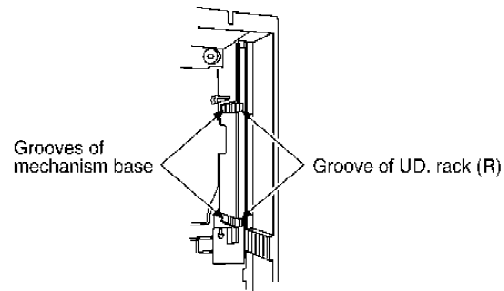


(Step 15)
Insert the UD. rack (R) to (2) from arrow (1).

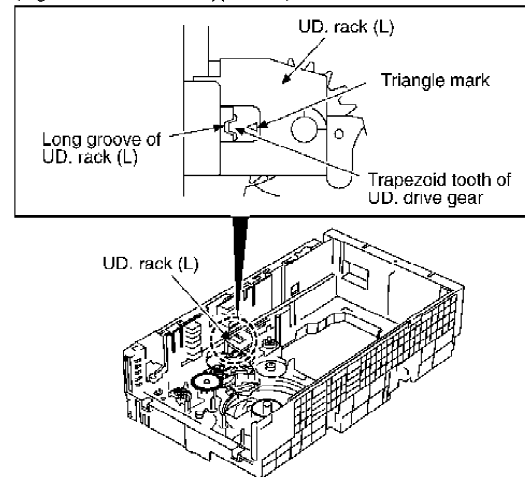


NOTE:

Put a groove of the mechanism base to the UD. rack (R).

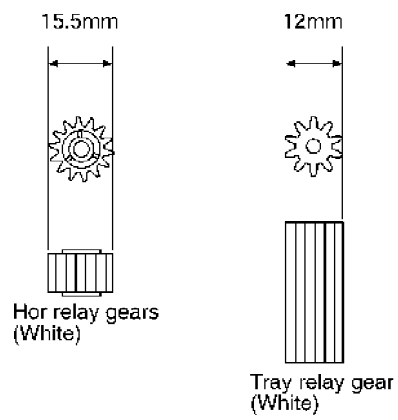
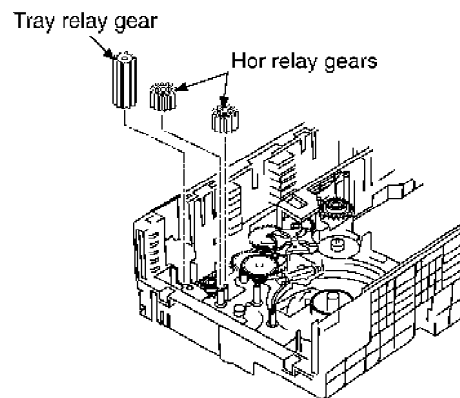


(Figure to see from the upper side)



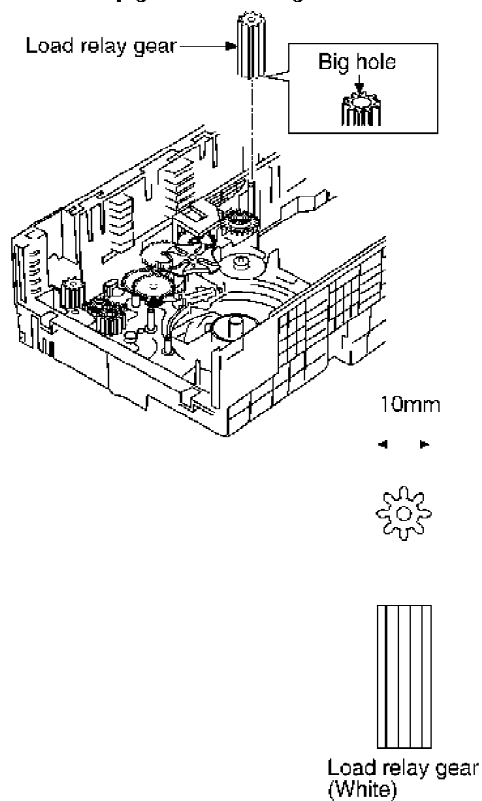
(Step 17)

Install the tray relay gear and 2 hor relay gears.



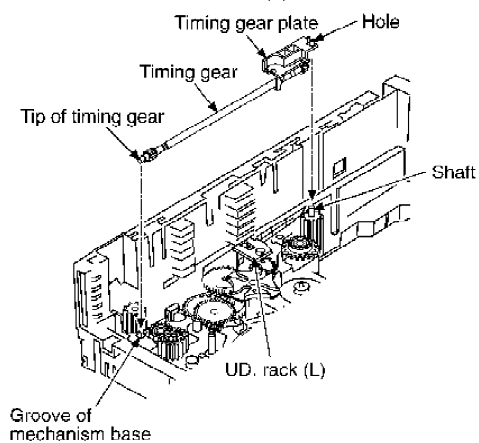
(Step 18)

Install the load relay gear to mechanism base.
(Fit load relay gear with its big hole downward.)



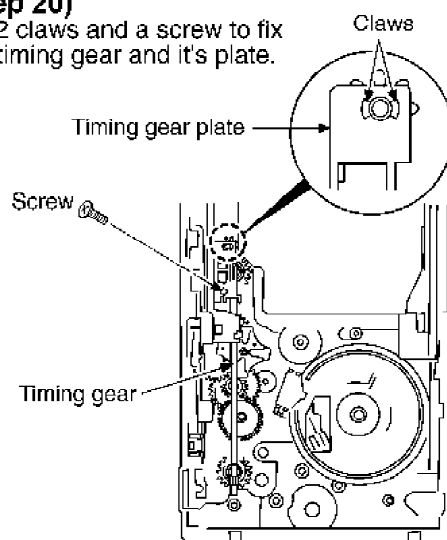
(Step 19)

Put on the top of the timing gear, then, install the timing gear and it's plate.
At that time avoid the UD. rack (L).



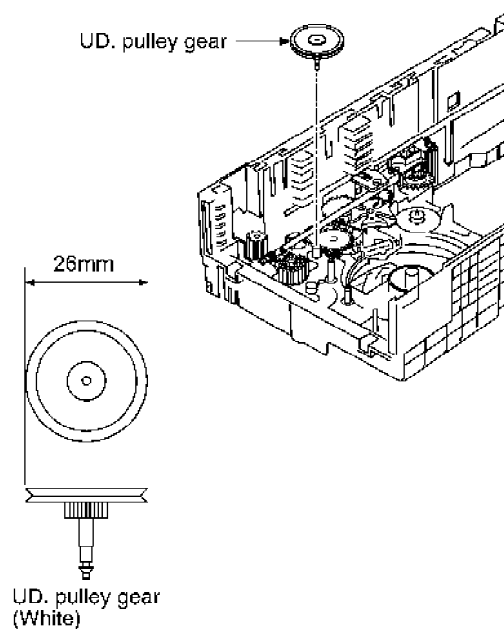
(Step 20)

Fix 2 claws and a screw to fix the timing gear and its plate.



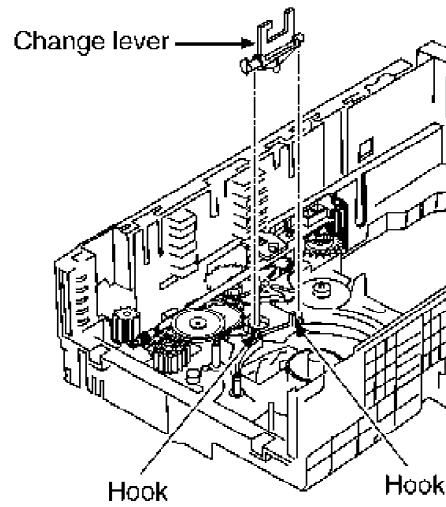
(Step 21)

Install the UD. pulley gear to mechanism base.



(Step 22)

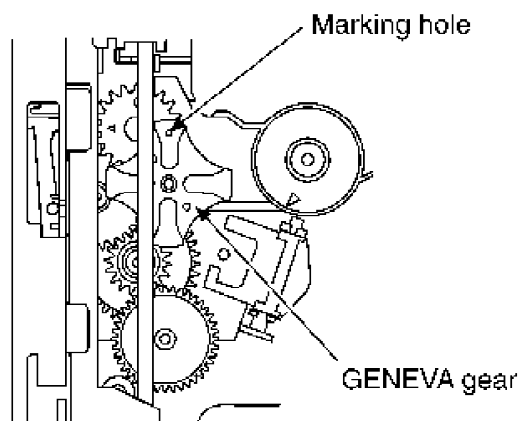
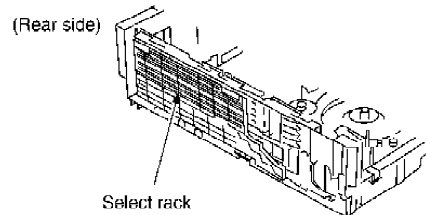
Insert the change lever with it upright.



(Step 23)

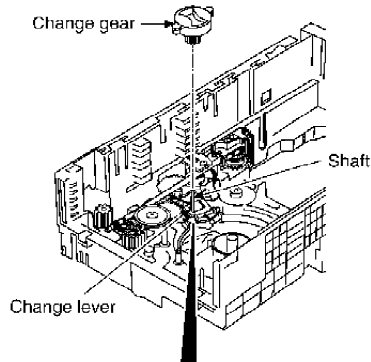
Be sure the notice of bellow before fixing the change gear.

1. Select track should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.

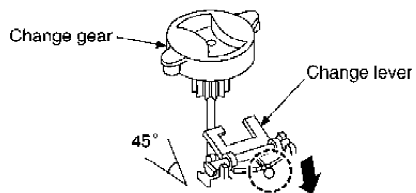


(Step 24)

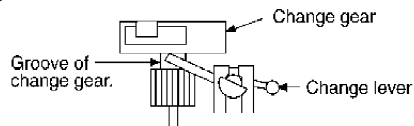
Install the change gear as insert the change lever into the groove of change gear.



1. Pushing the  part and pull up the change lever 45°.



2. Insert the change lever into the groove of change gear.

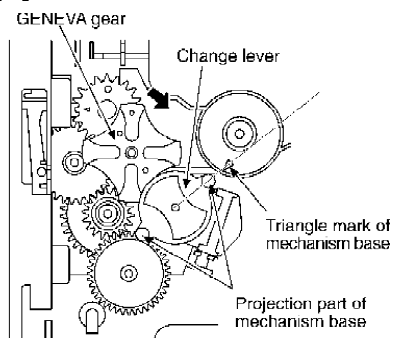


(Step 25)

Put change gear down with projection part of change gear fitted to triangle mark of mechanism base, when fixing change gear.
At that time, check change gear is inserted into the groove of change lever.

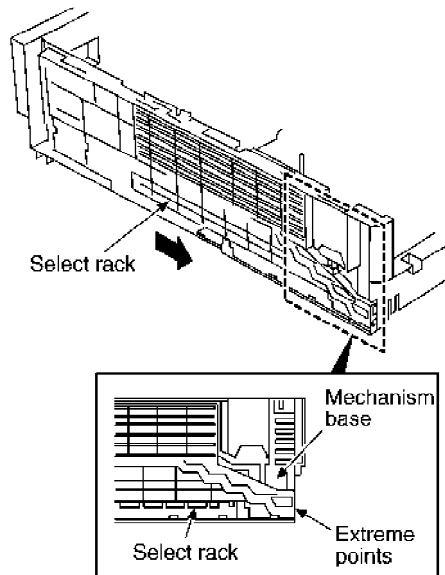
(Step 26)

Lastly, turn GENEVA gear clockwise slightly and drop change gear to mechanism base.



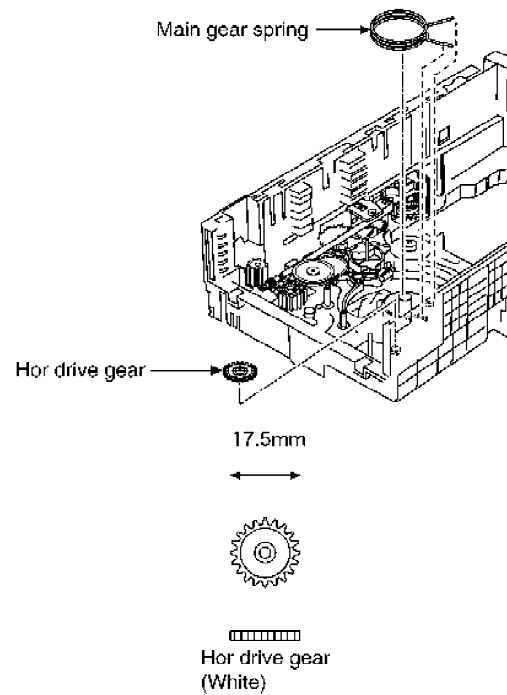
(Step 27)

Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.



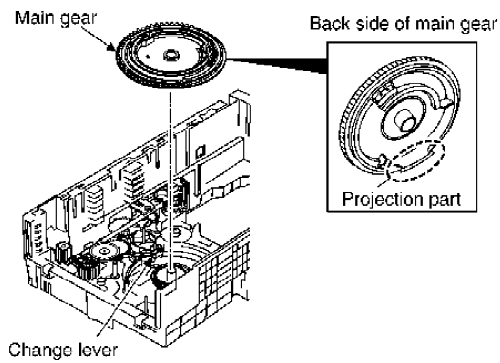
(Step 28)

Install the main gear spring and hor drive gear.



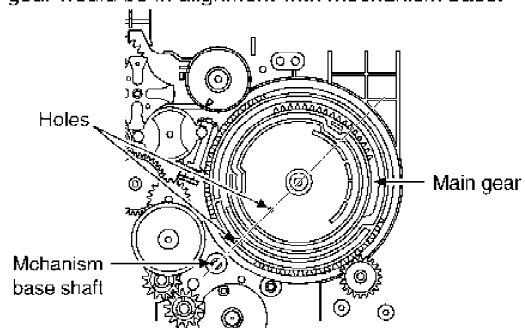
(Step 29)

Don't bring change lever into touch to projection part of main gear, when fixing main gear in mechanism base.



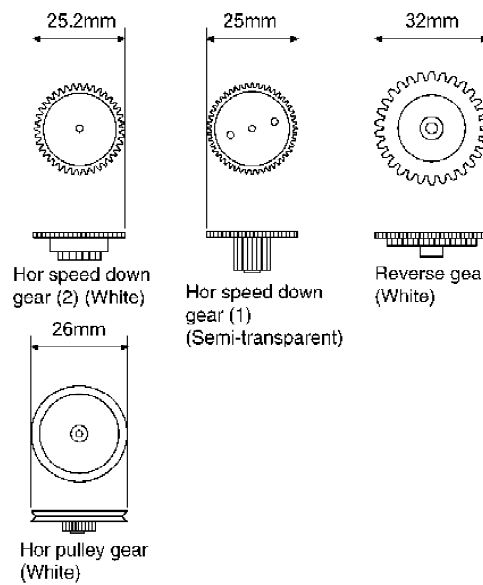
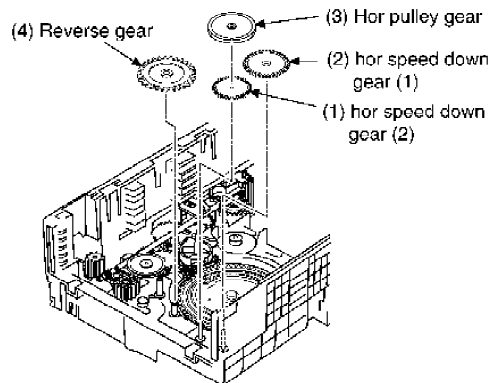
(Step 30)

After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism base.



(Step 31)

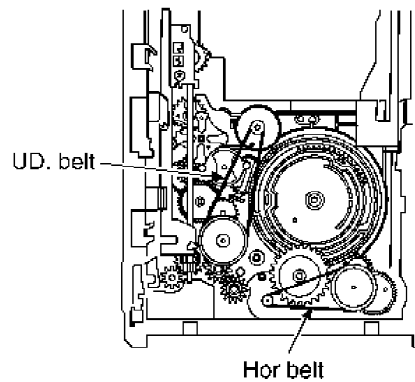
Install the hor speed down gear (2), hor speed down gear (1), hor pulley gear and reverse gear.

**(Step 32)**

Install the UD. belt and hor belt.

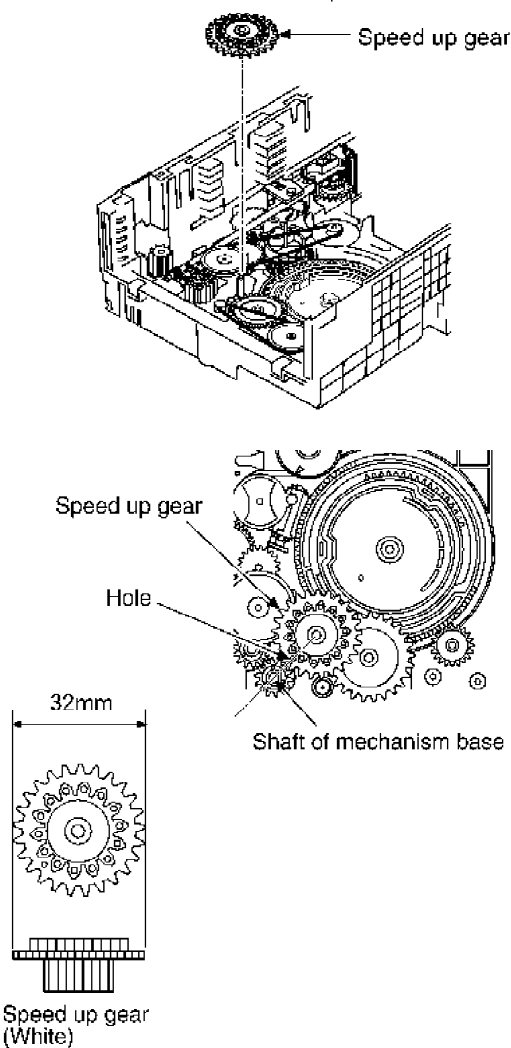
NOTE:

1. Take care not apply the grease to the belt.
2. Install the belt without twist.



(Step 33)

Install speed up gear to its shaft of mechanism base with 2 fitting.

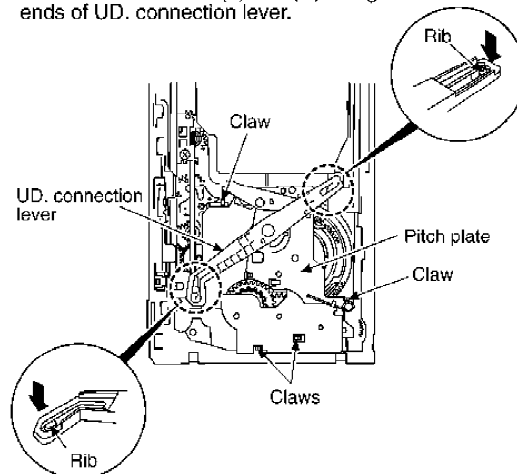


(Step 34)

Install the pitch plate. (The 4 claws should be latched.)

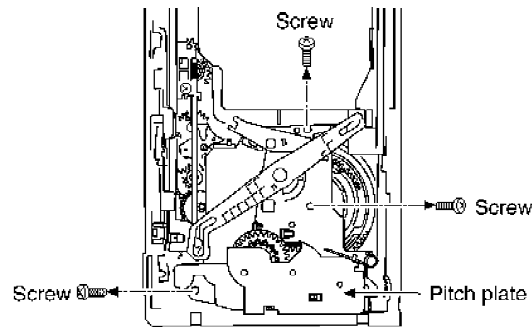
(Step 35)

Fix 2 ribs of UD. rack (L) and (R) into groove of both ends of UD. connection lever.



(Step 36)

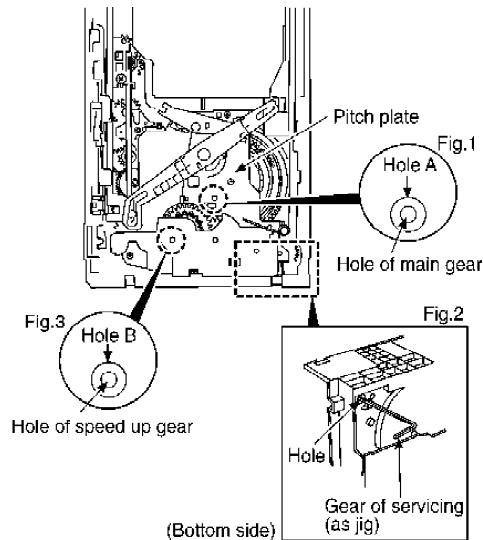
Fixed it by three screws further.



(Step 37)

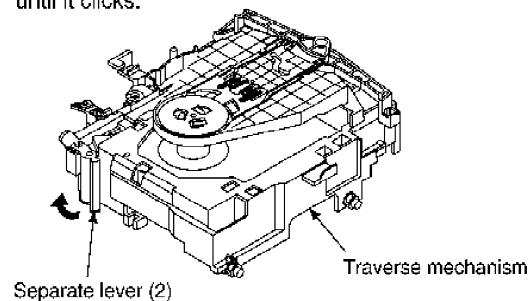
Be sure the notice of below before fixing the traverse mechanism.

1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)
If it's not fitted turn the speed up gear to adjust it.



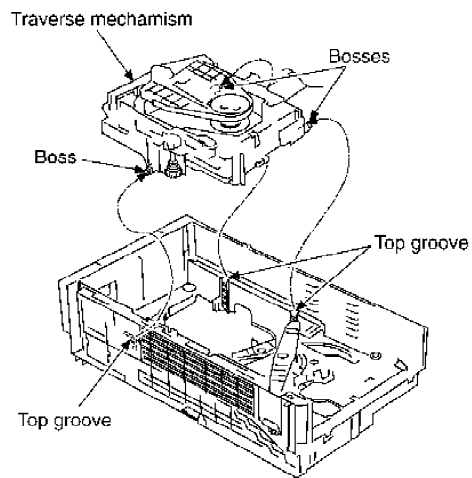
(Step 38)

Turn the separate lever (2) slowly toward left side until it clicks.



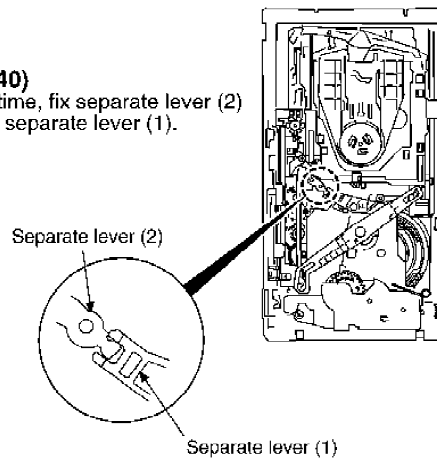
(Step 39)

Fix the left boss into the top groove of the UD. rack (L) and fix 2 bosses into the groove of the UD. rack (R).



(Step 40)

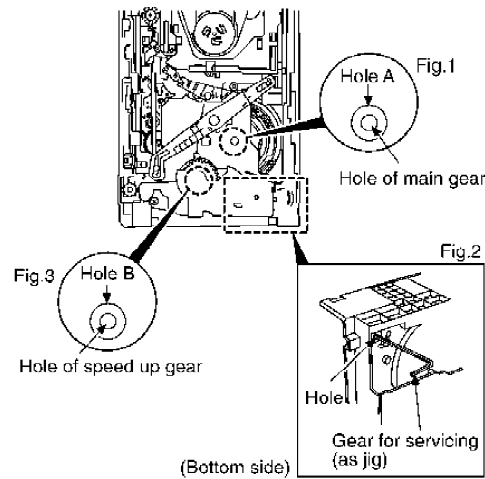
At that time, fix separate lever (2) into the separate lever (1).



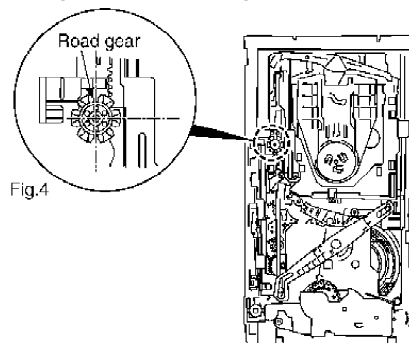
(Step 41)

After the traverse mechanism fixed,
confirm the phase in order below.

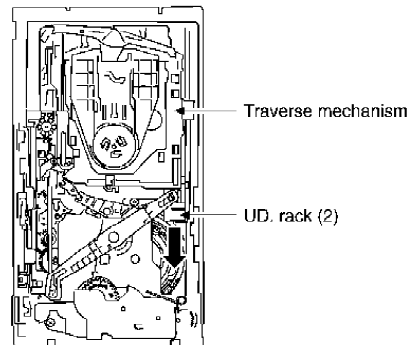
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)
If it's not fitted turn the speed up gear to adjust it.



3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)
Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.
NOTE: By this time, do not adjust to rotate the road gear.

**(Step 42)**

After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.

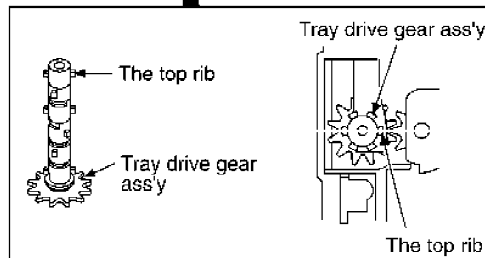
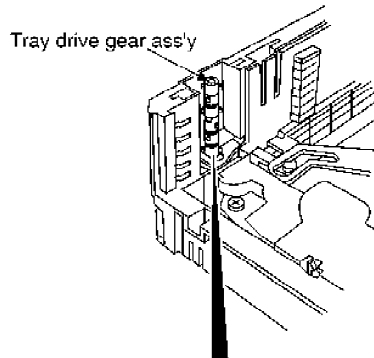
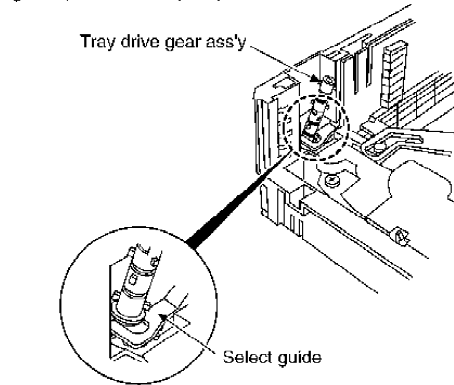


(Step 43)

Install the tray drive gear to select guide.
(Install the top rib of the tray drive gear with side ward.)

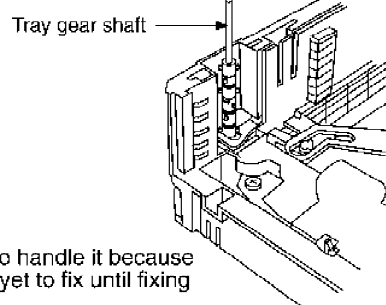
NOTE:

Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).



(Step 44)

Insert the tray gear shaft.

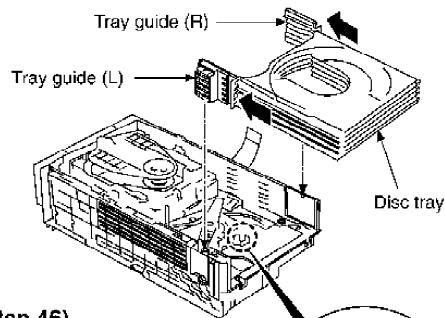


NOTE:

Be careful to handle it because the shaft is yet to fix until fixing top cover.

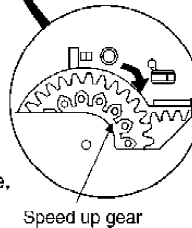
(Step 45)

Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.

**(Step 46)**

Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.

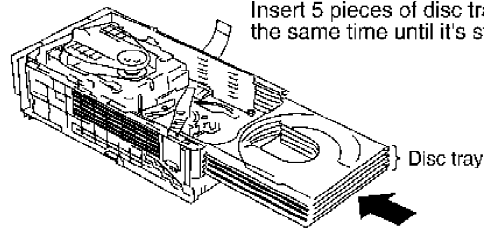
- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rotate, repeat from Step 45 and 46.

**NOTE:**

While keeping all position, install 5 pieces of disc tray.

(Step 47)

Insert 5 pieces of disc tray at the same time until it's stop.

**(Step 48)**

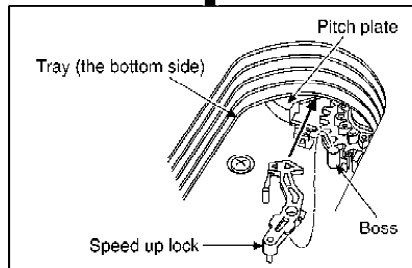
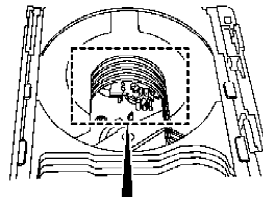
Turn the traverse side 180°.

(Step 49)

While install the tip of speed up lock between tray (No.1) of the most lower side and pitch plate for the time being.
(Do not to insert the cog of speed up gear), insert it to boss.

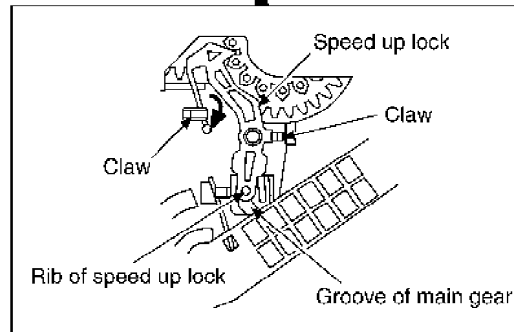
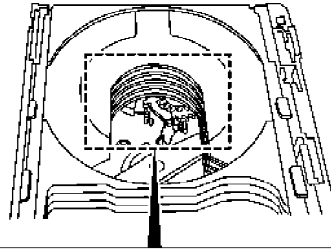
NOTE:

At that time, do not move the tray.
(See the tray the most front side)



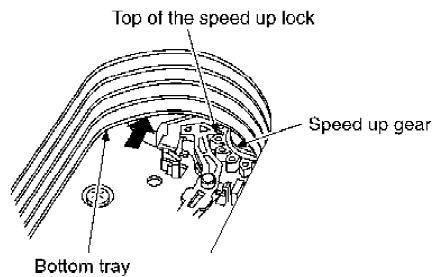
(Step 50)

Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.



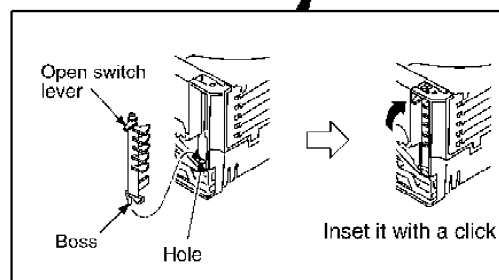
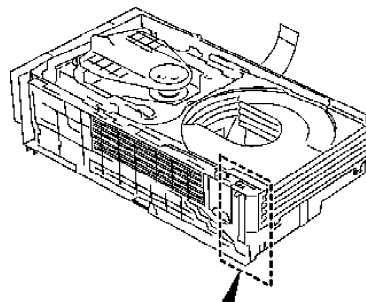
(Step 51)

Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.



(Step 52)

Install the open switch lever.
(Put the boss into the hole of the mechanism base.)



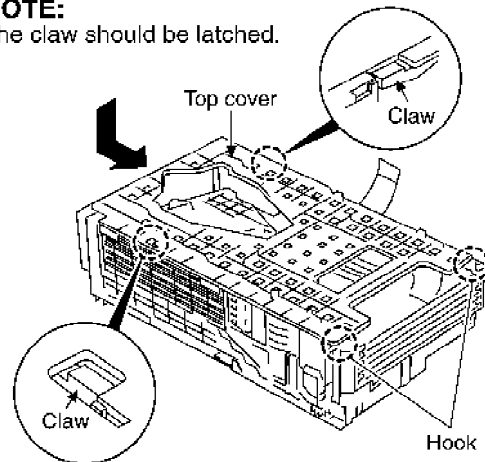
(Step 53)

Install the top cover.

Fix it into hooks and slide direction to the arrow.

NOTE:

The claw should be latched.



11.7. Disassembly for traverse mechanism

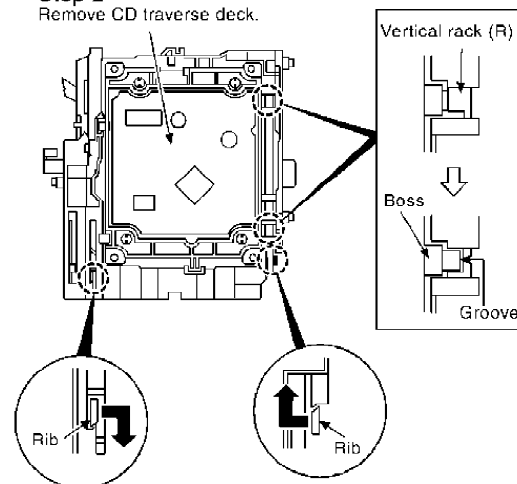
- Follow the (Step 1) - (Step 14) of Item 10.
- Follow (Step 1) - (Step 7) described in Item 11.5.
- Follow (Step 1) - (Step 7) described in Item 11.6.
- Follow Step 1 described in Item 11.6.

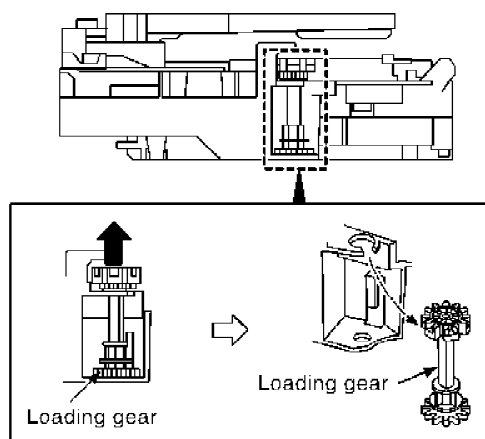
Step 1

Shift ribs of both side to the arrow direction.
(A vertical rack (R) slides and groove opens)

Step 2

Remove CD traverse deck.

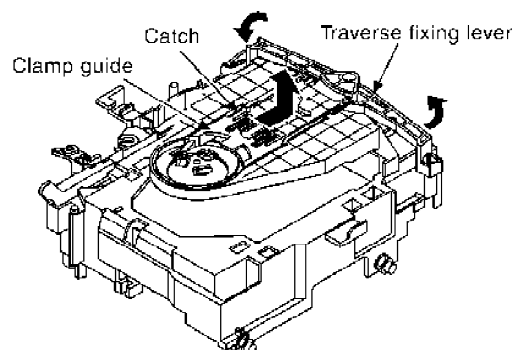




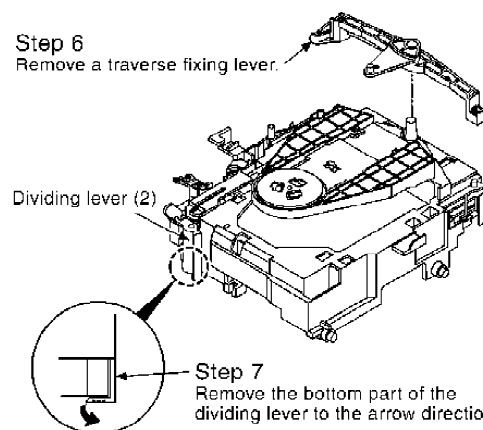
Step 3
Lift a loading gear slightly and pull out.

Step 4
Fixing lever to the arrow direction, rotate a traverse.

Step 5
Remove catch and take out a clamp guide.

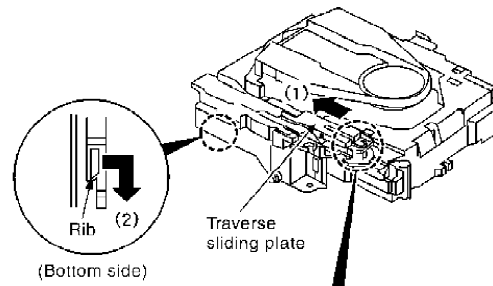


Step 6
Remove a traverse fixing lever.

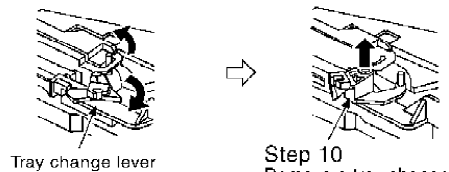


Step 7
Remove the bottom part of the dividing lever to the arrow direction.

Step 8
Slide a traverse sliding plate to the arrow direction (1), and shift a rib to the arrow direction (2).

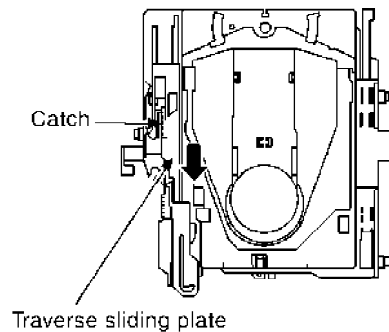


Step 9
Shifting a traverse sliding plate slightly and rotate a tray change lever.



Step 10
Remove a tray change lever.

Step 11
Holding the catch down, slide a traverse sliding plate to the arrow direction and remove it.



12. Service Position

12.1. Checking & Repair AC Inlet P.C.B

- Follow the (Step 1) - (Step 2) of Item 10.3.

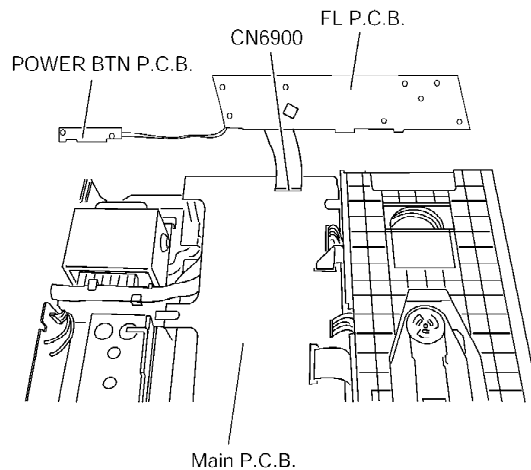
12.2. Checking & Repair FL P.C.B and Power BTN P.C.B.

- Follow the (Step 1) - (Step 2) of Item 10.3.

- Follow the (Step 1) - (Step 4) of Item 10.4.

- Follow the (Step 1) - (Step 3) of Item 10.11.

Step 1 Connect FFC at connector (CN6900).

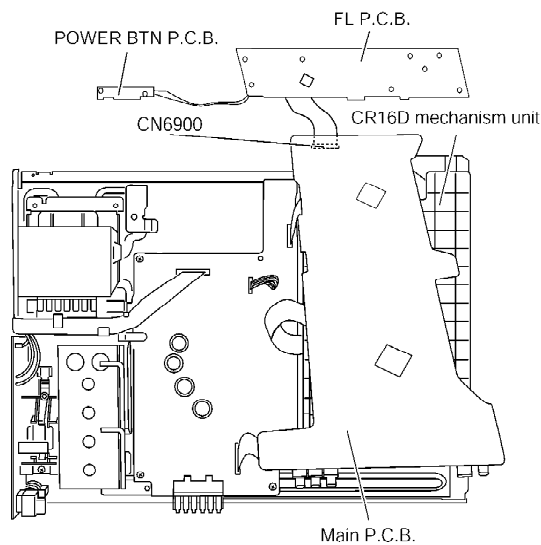


12.3. Checking & Repair Main P.C.B., Power P.C.B, Regulator P.C.B.

- Follow the (Step 1) - (Step 2) of Item 10.3.
- Follow the (Step 1) - (Step 4) of Item 10.4.
- Follow the (Step 1) - (Step 4) of Item 10.6.
- Follow the (Step 1) - (Step 3) of Item 10.11.
- Follow the (Step 1), (Step 3) of Item 10.7.

Step 1 Connect FFC at connector (CN6900).

Step 2 Turn over main P.C.B. to position on CR16D Mechanism unit horizontally.



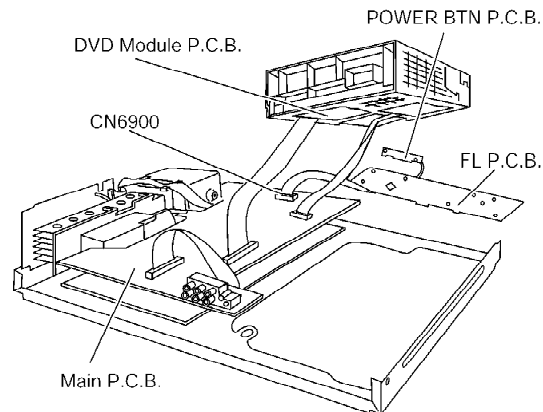
12.4. Checking & Repair DVD Module P.C.B.

- Follow the (Step 1) - (Step 2) of Item 10.3.
- Follow the (Step 1) - (Step 4) of Item 10.4.
- Follow the (Step 1) - (Step 4) of Item 10.6.
- Follow the (Step 1) - (Step 3) of Item 10.11.
- Follow the (Step 1) of Item 10.5.

Step 1 Connect FFC at connector (CN6900).

Step 2 Put the CR16D Mechanism Unit up position and checking or repair the DVD Module

P.C.B.



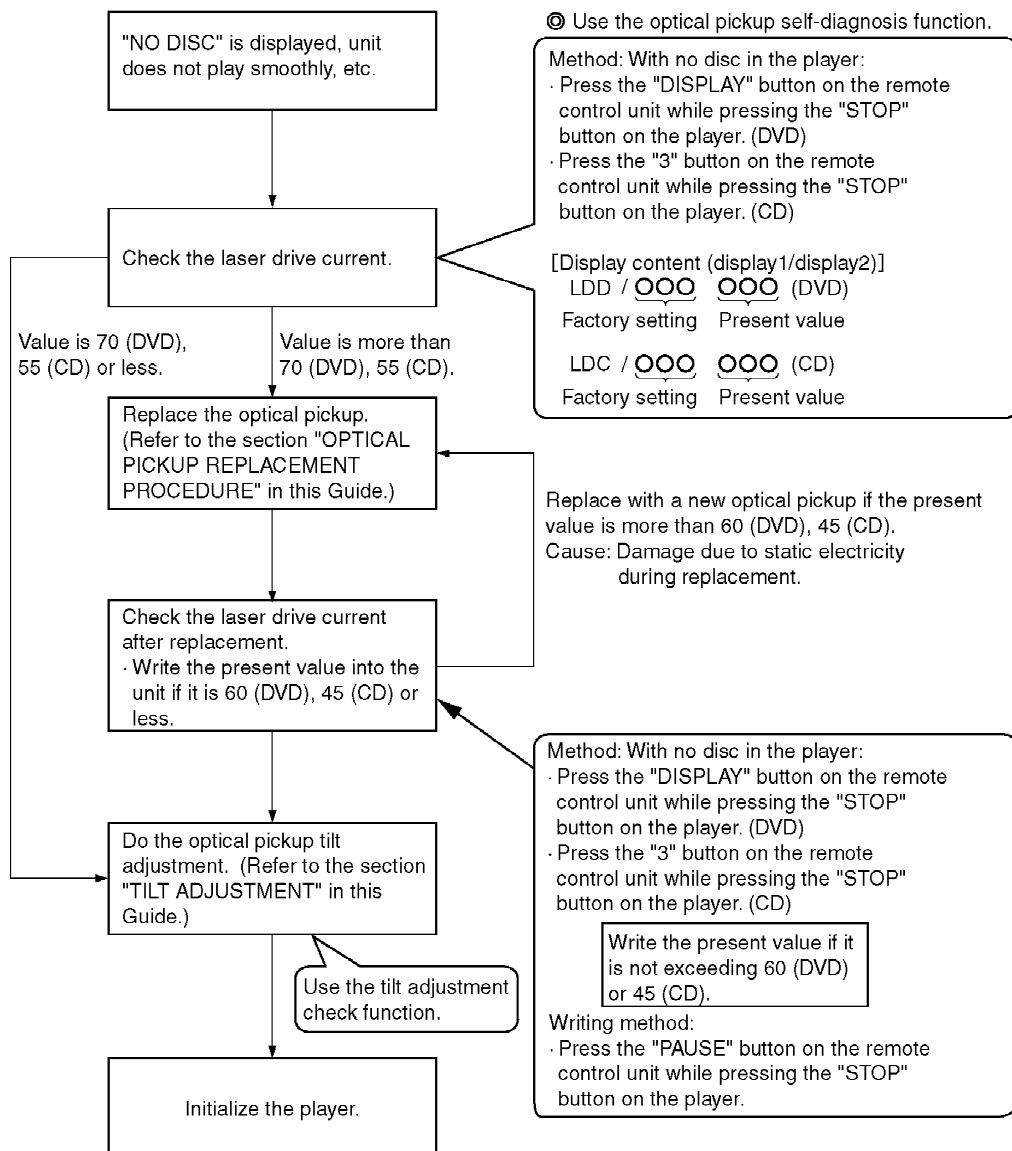
13. Optical Pick-up Self-Diagnosis and Replacement Procedure

13.1. Optical Pickup Breakdown Diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment. Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

Note:

Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)



13.2. Service Mode Table 1

The service modes can be activated by pressing various button combination on the player and remote control unit.

Player buttons	Remote control unit buttons	Application	
STOP	0	Error code display	(Refer to “13.3. DVD Diagnostic Function Code”).
	5	Tilt adjustment	Refer to “16.4. Optical adjustment”
	6	Area number and broadcasting system check	
	7	Built-in program version check	
	DISPLAY	DVD laser drive current check	Refer to “13.1. Optical Pickup Breakdown Diagnostic Function Code”
	3	CD laser drive current check	
	PAUSE	Writing of laser drive current value after replacement of optical pickup (Do use this function only when optical pickup is replaced.)	
	≥ 10	Initialization of the player (factory setting is restored.) Used after replacement of micro-computer and its peripherals and printed circuit board.	

13.3. DVD Self Diagnostic Function-Error Code

Error Code	Error Content	Additional error explanation
	U, H error	
U11	Focus error	
H01	Tray loading error	
H02	Spindle servo error	(Spindle servo, DSC (IC8251) SP motor, CLV servo error)
H03	Traverse servo error	(Traverse motor IC8251)
H04	Tracking servo error	
H05	Seek error	
H06	Power error	Cannot switch off the power because of the panel and system computer communication error
H07	Spindle motor drive error	Spindle motor
	DSC related	
F500	DSC error	DSC (IC8251) stops in the occurrence of servo error (start-up error, etc)
F501	DSC not Ready error	DSC-system computer communication error (Communication caused by idling of DSC)
F502	DSC Time out error	Similar disposal as F500
F503	DSC communication Failure	Communication error (result error occurred although communication command was sent)

Error Code	Error Content	Additional error explanation
F504	Error adjusting DSC data slice offset	
F505	DSC Attention error	Similar disposal as F500
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc m
	ODC related	
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessi caused by the demodulation defect
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnor data
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc
F610	ODC abnormality	No permission for command execution
F611	6626 QCODE don't read Error	Access failure to seek address in CD series
F612	No CRC OK for a specific time	Access failure to ID data in DVD series
F620	Laser safeguard: high temperature condition	
F621	Laser safeguard: circuit failure condition	
F630	No reply to KEY DET enquiry	(for internal use only)
F631	CPPM KEY DET is not available till the FILE terminal	(CPPM file system is unreadable caused by scratches)
F632	CPPM KEY DET is not available	Been revoked or falsified
	Disc code	
F103	Illegal highlight Position	Big possibility of disc specification violation during highli
	HIC Error	
F4FF	Force initialize failure (time out)	
	Micro computer error	
F700	MBX overflow	When replying message to disc manager
F701	Message command does not end	Next message is sent before replying to disc manager
F702	Message command changes	Message is changed before it is sent as a reply to disc ma

Error Code	Error Content	Additional error explanation
F880	Task number is not appropriate	Message coming from a non-existing task
F890	Sending message when message is being sent to AV task	Sending message to AV task
F891	Message couldn't be sent to AV task	Begin sending message to AV task
F893	FROM falsification	
F894	EEPROM abnormality	
F895	Language area abnormality	Firm version agreement check for factory preset setting failure prevention
F896	No existence model	Firm version agreement check for factory preset setting failure prevention
F897	Initialize is not completed	Initialize completion check for factory preset setting failure prevention
F8A0	Message command is not appropriate	Begin sending message to AV task

Note:

An error code will be canceled if a power supply is turned OFF.

***1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.**

13.4. Service mode table 2

Pressing various button combinations on the player and remote control unit can activate the service modes.

Item	Player mode and button combination	Function	Display	Cancellation method
Jitter check	In STOP (no disc) mode, press STOP button on the player, and "5" button on the remote control unit.	Jitter check Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	J _xxx/yyy_zz (display1/display2) Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	Press STOP or OPEN button.
Error code check	In STOP (no disc) mode, press STOP button on the player, and "0" button on the remote control unit. * With pointing of cursor up and down on display	Error code check The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: → DVDnn UXX Error code = 0 x DBXX is expressed: → DVDnn HXX Error code = 0 x DXXX is expressed: → DVDnn FXXX Error code = 0 x 0000 is expressed: → DVDnn F--- * "xx" denotes the error code.	Cancelled automatically 5 seconds later.
Initial setting of laser drive current	In STOP (no disc) mode, press STOP button on the player, and PAUSE button on the remote control unit.	Initial setting of laser drive current Initial current value for each of DVD laser and CD laser is separately saved in EEPROM.	LDO_034_028 (display1/display2) The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is switched on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP (no disc) mode, press STOP button on the player, and DISPLAY button on the remote control unit.	DVD laser drive current measurement DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	LDD_034_032 (display1/display2) The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	Cancelled automatically 5 seconds later.
ADSC internal RAM data check	In STOP (no disc) mode, press STOP button on the player, and "1" button on the remote control unit.	ADSC internal RAM data check ADSC internal RAM data is read out and displayed.	OFA_6901 The value is shown in hexadecimal notation. The above example shows the data in ADSC address OFAh is 6901h.	Press STOP or PLAY button.
CD laser drive current measurement	In STOP (no disc) mode, press STOP button on the player, and "3" button on the remote control unit.	CD laser drive current measurement CD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	LDC_028_026 (display1/display2) The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP (no disc) mode, press STOP button on the player, and "7" button on the remote control unit.	Version display	srtr/xyzzz (display1/display2) 	Cancelled automatically 5 seconds later.
Initialization	In STOP (no disc) mode, press STOP button on the player, and ≥ 10 button on the remote control unit.	Initialization User settings are cancelled and player is initialized to factory setting.	--INIT--	_____
Area	In STOP (no disc) mode, press STOP button on the player, and "6" button on the remote control unit.	Area number and broadcasting system check	w xy zzz 	Cancelled automatically 5 seconds later.
Region and syscon version display	In STOP (no disc) mode, press STOP button on the player, and "8" button on the remote control unit.	Region and syscon display	w_xxyzzz 	Cancelled automatically 5 seconds later.
Communication error display	In STOP (no disc) mode, press STOP button on the player, and "MENU" button on the remote control unit.	Displays frequency of communication errors between system control IC and mechanism control IC during DVD module.	ER_02_30	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP (no disc) mode, press STOP button on the player, and "▲" button on the remote control unit.	Timer 1 check Laser operation timer Operation time is measured separately for DVD laser and CD laser.	T1_1234/5678 (display1/display2) Shown to the left is DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 1 reset	While displaying Timer 1 data, press STOP button on the "▼" button on the remote control unit.	Timer 1 reset Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	T1_0000/0000 (display1/display2)	Cancelled automatically 5 seconds later.
Timer 2 check	In STOP (no disc) mode, press STOP button on the player, and "▶" button on the remote control unit.	Timer 2 check Spindle motor operation timer	T2_12345 Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999".	Cancelled automatically 5 seconds later.
Timer 2 reset	While displaying Timer 2 data, press STOP button on the player and "◀" button on the remote control unit.	Timer 2 reset Spindle motor operation timer	T2_00000	Cancelled automatically 5 seconds later.

13.5. Sales demonstration lock function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCKED" is displayed on the unit, and ordinary operation is disabled.

13.5.1. Setting

- Prohibiting removal of disc

1. Select the DVD/CD function.

2. Press and hold down the button on the player and the power button on the player for at least three seconds. (The message, "___LOCKED_" appears when the function is activated.)

Note:

OPEN/CLOSE , DISC CHECK and DISC CHANGE buttons are invalid and the player displays "___LOCKED_" while the lock function mode is entered.

- Prohibiting operation of selector and disk

1. Select the DVD/CD function.

2. Press and hold down the  button on the player and the power button on the remote controller unit for at least three seconds. (The message, “___LOCKED_” appears when the function is activated.)

Note:

The following buttons are invalid and the player displays “___LOCKED_” while the lock function mode is entered.

Player	 ,  ,  , SELECTOR,  ,  , VOLUME KNOB, DISC CHECK, DISC CHANGE, DISC1-DISC5
Remote controller unit	SLEEP, REPEAT, 0~9,  , RETURN, TOP MENU,  ,  ,  ,  ,  ,  , POSITION MEMORY, TUNER/BAND, D.MIX, CH SELECT/ TEST, SET UP/ MUTING, DISPLAY, GROUP, TV, VCR/ AUX, QUICK REPLAY, SUBTITLE, FL DISPLAY, CH & VOLUME

13.5.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOCK" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

13.6. Handling After Completing Repairs

Use the following procedure after completing repairs.

13.6.1. Method

Confirm that the power is turned on:

1. Press the "OPEN/CLOSE" button to close the tray.
2. Press the "POWER" button to turn off the power.
3. Disconnect the power plug from the outlet.

13.6.2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

14. Self-Diagnosis Function

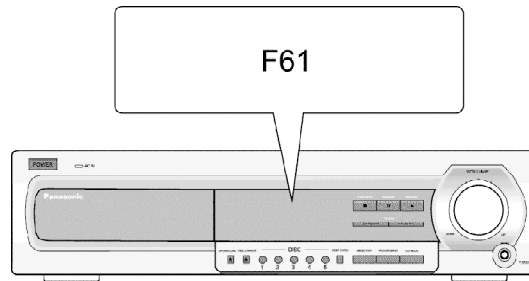
14.1. Automatic Displayed Error / Codes

14.1.1. Automatic Display Function

For a power unit error, the code is automatically displayed.

F61:

Automatically displayed on the LCD of the player.



14.1.2. Re-Display

- For F61 Display
- When the code, F61 is displayed, the power is automatically turned off.
- The code, F61 is displayed for three seconds, and then the current time appears.
- To retrieve the code, turn on the power button so that the code F61 appears, however, is switched to time display after three seconds, and the power is automatically turned off.

14.1.3. Description of Error Code

14.1.3.1. F61

- State, Condition

When the power is turned on, the unit is automatically turned off.
The power does not turn on.

- Cause, Troubleshooting

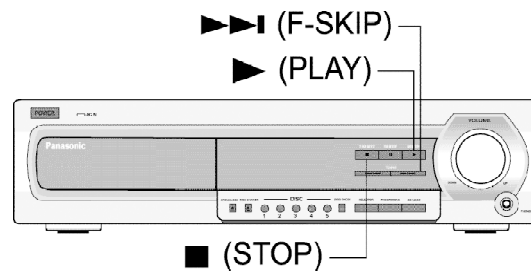
Power circuit system failure and/or direct current flown to speaker terminal / Identify the cause and replace with new parts.

14.2. Memorized Error Codes

14.2.1. Activating Self-Diagnosis Function and Displaying Method

1. Turn on the power.
2. Select DVD/CD function. With no DVD/CD inserted in the player, press and hold down the  button simultaneously for at least two seconds, and press the F_SKIP  button for at least two seconds in order to display "T_____".
3. Press the  button. If a memorized error is detected, the result of

self diagnosis is displayed. (Ex.: T H15)(See table below) / If several errors are detected, press the  button to display each.



14.2.2. Re-Display

- Press the power button to turn off the power, and then turn on the power.
- The details of self diagnosis are stored in the unit memory. / To retrieve them, follow the procedure described the above, “Activating Self-Diagnosis Function and Displaying Method”.

14.2.3. Deleting Details of Self Diagnosis

- After repair, press and hold down the  button for at least five seconds, “_ CLEAR _” appears for a second and then “T_____” appears. (Deleting the details of self diagnosis)
- After repairing errors, be sure to delete the details of self diagnosis.

Error Code	State, Condition	Cause, Troubleshooting
H16	The disc tray cannot be closed: it opens spontaneously.	Disc tray open/close detection switch (S3) failure. (Check and replace)
F17	BOTTOM SW (S3) is abnormal.	BOTTOM SW (S3) failure. (Check and replace)
F22	Loading Motor/ Mechanism abnormal	Loading Motor/Mechanism failure. (Check and replace).
F27	Slide operation Abnormal	Eg. At tray 5, power off. When the slide is not at position, plug ac out. Ac in, let the slide move to the end, then stop it from immediately for 6s.
F28	This DISC loading is abnormal	Tray open. Press [CLOSE], while tray is open, ac out, ac in, power on, don't let the slide moves in for at least 5s.
F29	This DISC unloading is abnormal	Power on. Trays load, prevent the disc from loading for at least 5s.

15. Service Precautions

15.1. Recovery after the DVD player is repaired

- When FLASH ROM IC or DVD module P.C.B. is replaced, carry out the recovery processing to optimize the drive.
Playback the recovery disk to process the recovery automatically.
- Recovery disc (Product number: RFKZD03R005)
- Performing recovery
 1. Load the recovery disc RFKZD03R005 on to the player and run it.
 2. Recovery is performed automatically. When it is finished, a message appears on the screen.
 3. Remove the recovery disc.
 4. Turn off the power.

Note:

This unit requires no initialization process carried out after the traditional DVD players were repaired.

When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item of "Initialization" in 13.4. is carried out. Write down the contents of the setting before recovery processing, and reset the player.

15.2. Firmware version-up of the DVD player

- The firmware of the DVD player may be renewed to improve the quality including operability and playability to the substandard discs.processing to optimize the drive.
The recovery disc has also firmware version-up.
- After version-up, recovery processing is executed automatically.
- Part number of the recovery disc for version-up will be noticed when it is supplied.
- Updating firmware
 1. Load the recovery disc that is supplied to the player and run it.
 2. Firmware version of the player is automatically checked.
Appropriate message appears whenever necessary.
 3. Using remote controller's cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
 4. a. If Yes is selected, version updating is performed.
b. If No is selected, only recovery is performed.
 5. a. When updating is finished, remove the disc according to the message appearing on the screen.
b. Remove the disc according to the message appearing on the screen.

6. Turn off the power.

Note:

If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.

In such a case, replace the FLASH ROM IC and carry out the version-up again.

16. Adjustment Procedure

16.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S20 [SPG]
	Hex wrench	Available on sales route.
Others	Grease	RFKXPG641 [SPG]
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD03R005 [SPG]

16.2. Important points in adjustment

16.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.
 1. Optical pickup unit
 2. Spindle motor unit
 3. Optical pickup peripheral parts (such as rail)

Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment is generally unnecessary after replacing the traverse unit.

16.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this Manual.

16.3. Storing and handling of test discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.
1. Do not place discs directly onto the workbench, etc., after use.
 2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
 3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
 4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

16.4. Optical adjustment

16.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T30 (center periphery) T43 (outer periphery) play	DVDT-S20 [SPG]
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

16.4.1.1. Adjustment procedure

1. While pressing STOP button on the main unit, press "5" on the remote control unit.
2. Confirm that "J_xxx/yyy_zz" (display1/display2) is shown on the front display.

For your information:

"yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

Note:

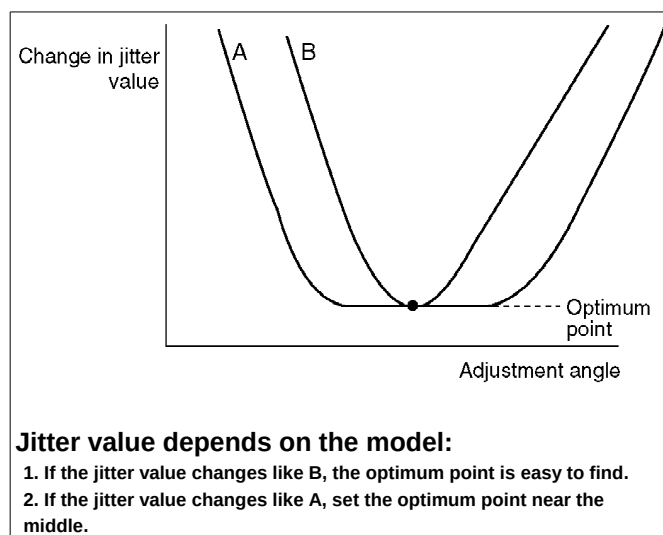
Jitter value appears on the front display.

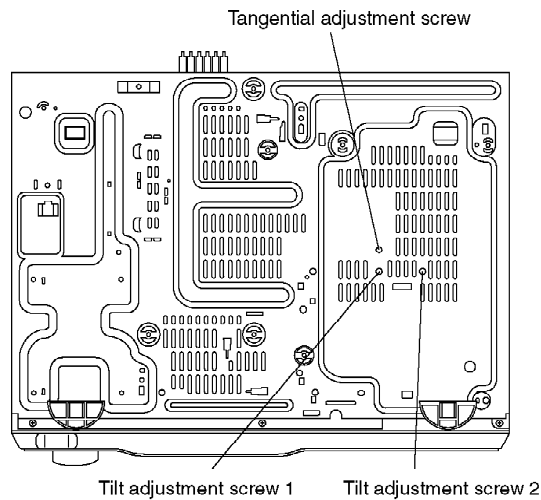
3. Play test disc T30 (center periphery).

4. Adjust tangential adjustment screw so that the jitter value is minimized.
5. Play test disc T30 (center periphery).
6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
7. Play test disc T30 (center periphery).
8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

16.4.1.2. Important points

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



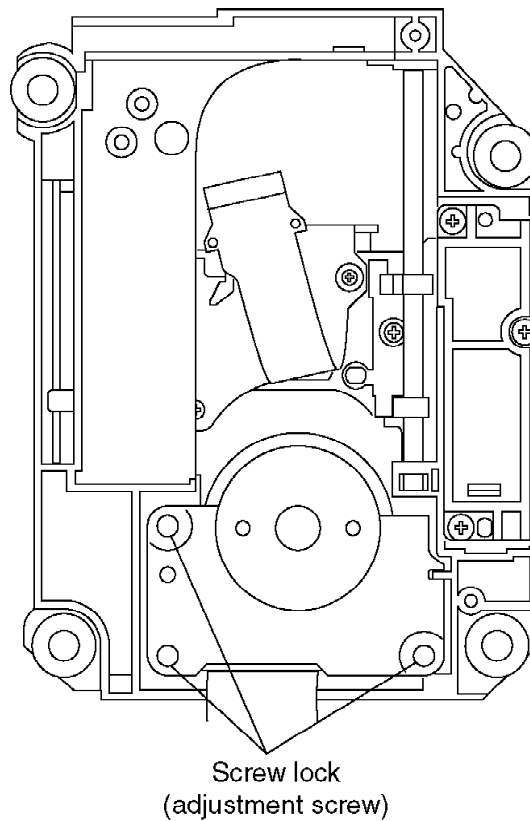


16.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

16.4.1.4. Procedure for screw lock

1. After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.
2. Lay the traverse unit upside down, and fix adjustment screw with screw lock.
3. After fixing, reassemble traverse unit, clamper base, tray and top cover.



17. Abbreviations

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	
	ASI	AUDIO RF
	ASO	SERVO AMP INVERTED INPUT
	ASYNC	SERVO AMP OUTPUT
B		AUDIO WORD DISTINCTION SYNC
	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK

INITIAL/LOGO		ABBREVIATIONS
C	CAV	CONSTANT ANGULAR
	CBDO	VELOCITY
	CD	CAP. BLACK DROP OUT
	CDSCK	COMPACT DISC
	CDSRDATA	CD SERIAL DATA CLOCK
		CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCK SELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIP SELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ
	DMUTE	CLOCK
	DO	DIGITAL MUTE CONTROL
	DOUT0~UP	DROP OUT
		DATA OUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLIF	
	DVD	DATA SLICE LOOP FILTER
		DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP
	FEO	INVERTED INPUT
	FG	FOCUS ERROR AMP OUTPUT
	FSC	FREQUENCY GENERATOR
	FSCK	FREQUENCY SUB CARRIER FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE
I	IECOUT	IEC958 FORMAT DATA OUTPUT
	IPFRAG	INTERPOLATION FLAG
	IREF	I (CURRENT) REFERENCE
	ISEL	INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK

INITIAL/LOGO		ABBREVIATIONS
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND
	MDATA	CLOCK
	MDQ0~UP	MEMORY SERIAL COMMAND
	MDQM	DATA
	MLD	MEMORY DATA INPUT/OUTPUT
	MPEG	
		MEMORY DATA I/O MASK MEMORY SERIAL COMMAND LOAD MOVING PICTURE EXPERTS GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE
	PCK	DIFFERENCE
	PDVD	PLL CLOCK
	PEAK	DVD TRACKING PHASE
	PLLCLK /	DIFFERENCE
	PLLOK	CAP. FOR PEAK HOLD
	PWMCTL	CHANNEL PLL CLOCK
	PWMDA	PLL LOCK
	PWMOA, B	PWM OUTPUT CONTROL
		PULSE WAVE MOTOR DRIVE A PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE
	RS	OUTPUT
	RSEL	(CD-ROM) REGISTER SELECT
	RST	RF POLARITY SELECT
	RSV	RESET
		RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK
	SCL	RECEIVER
	SCLK	SERIAL CLOCK
	SDA	SERIAL CLOCK
	SEG0~UP	SERIAL DATA
	SELCLK	FL SEGMENT OUTPUT
	SEN	SELECT CLOCK
	SIN1, 2	SERIAL PORT ENABLE
	SOUT1, 2	SERIAL DATA IN
	SPDI	SERIAL DATA OUT
	SPDO	SERIAL PORT DATA INPUT
	SPEN	SERIAL PORT DATA OUTPUT
	SPRCLK	SERIAL PORT R/W ENABLE
	SPWCLK	SERIAL PORT READ CLOCK
	SQCK	SERIAL PORT WRITE CLOCK
	SQCX	SUB CODE Q CLOCK
	SRDATA	SUB CODE Q DATA READ
	SRMADR	CLOCK
	SRMDT0~7	SERIAL DATA
		SRAM ADDRESS BUS
	SS	SRAM DATA BUS 0~7
	STAT	START/STOP
	STCLK	STATUS
	STD0~UP	STREAM DATA CLOCK
	STENABLE	STREAM DATA
		STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY
	STVALID	SELECT
	SUBC	STREAM DATA VALIDITY
	SBCK	SUB CODE SERIAL
	SUBQ	SUB CODE CLOCK
	SYSCLK	SUB CODE Q DATA

	SYSTEM CLOCK
INITIAL/LOGO	ABBREVIATIONS
T	TE TIBAL TID TIN TIP TIS TPSN TPSO TPSP TRCRS TRON TRSON
	TRACKING ERROR BALANCE CONTROL BALANCE OUTPUT 1 BALANCE INPUT BALANCE INPUT BALANCE OUTPUT 2 OP AMP INPUT OP AMP OUTPUT OP AMP INVERTED INPUT TRACK CROSS SIGNAL TRACKING ON TRAVERSE SERVO ON

INITIAL/LOGO	ABBREVIATIONS
V	VBLANK VCC VCDCONT VDD VFB VREF VSS
	V BLANKING COLLECTOR POWER SUPPLY VOLTAGE VIDEO CD CONTROL (TRACKING BALANCE) DRAIN POWER SUPPLY VOLTAGE VIDEO FEED BACK VOLTAGE REFERENCE SOURCE POWER SUPPLY VOLTAGE
W	WAIT WDCK WEH WSR
	BUS CYCLE WAIT WORD CLOCK WRITE ENABLE HIGH WORD SELECT RECEIVER

INITIAL/LOGO		ABBREVIATIONS
X	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPT REQUEST
	XI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIP SELECT
	XVDS	X V-DEC CONTROL BUS
	XVSYNCO	STROBE
		X VERTICAL SYNC OUTPUT

18. Voltage Chart

18.1. DVD Module P.C.B.

18.2. Main P.C.B.

18.3. CD Loading P.C.B. & AC Inlet P.C.B. & Regulator P.C.B.

18.4. FL P.C.B.

18.5. Power P.C.B.

19. Wave Form Chart

20. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S6900:

Standby / on switch ().

S6901:

Drawer open / close switch ( Open / Close).

S6902:

Disc change button (DISC CHANGE ).

S6903-S6907:

Disc switch (DISC1-DISC5).

S6908:

Disc check switch.

S6909

F. skip, search and Tuning switch (  |   / TUNING ).

S6910:

R. skip, search and Tuning switch (  |   / TUNING ).

S6911:

Source select switch (SELECTOR).

S6912:

Progressive out switch.

S6913:

CD / Tune mode switch [ / TUNE MODE].

S6915:

Play and memory switch ( Memory).

S6916:

Pause and FM mode switch( FM MODE).

S6917:

Stop and TUNE mode switch ( TUNE MODE).

VR6900:

Volume control.

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance)

with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

- Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts list.

- Voltage and signal line



: +B Signal line



: CD-DA signal line



: Main signal line



: DVD (Video) signal line



: DVD (Audio) signal line



: FM/AM signal line



: -B Signal line

Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

21. Block Diagram

22. Schematic Diagram

23. Printed Circuit Board Diagram

24. Wiring Connection Diagram

25. Illustration of IC's, Transistors and Diodes

26. Terminal Function of ICs

26.1. IC2018 (C2CBJG000578): Operation CPU

Pin No.	Terminal Name	I/O	Function
1	ST_SW	I	Stock switch signal input
2	OP/ CL_REV	O	Reverse control signal output for OPEN/CLOSE motor
3	OP/ CL_FWD	O	Forward control signal output for OPEN/CLOSE motor
4	OPEN_SW	I	Rotary tray OPEN switch signal input
5	POSITION	I	Position detection sensor signal input
6	N.C	-	Not used, open
7	UP/DOWN F	O	Changer motor 2 forward control signal output
8	BYTE	-	GND
9	CNVSS	-	GND
10	N.C	-	Not used, open
11	N.C	-	Not used, open
12	RESET	I	System reset signal input
13	XOUT	-	Main clock output (10.0MHz)
14	VSS	-	GND
15	XIN	-	Main clock input (10.0MHz)
16	VCC	-	Power supply terminal (5V)
17	NMI	I	Connect to VCC, external interrupt I/P
18	RMT	I	Remocon signal input
19	SYNC	I	AC failure detection input
20	UP/DOWN R	O	Changer motor 2 reverse control signal output

Pin No.	Terminal Name	I/O	Function
21	CHANGE SW	I	Changer change switch signal input
22	N.C	-	Not used, open
23	EDA	I/O	EEPROM data in/output
24	ECK	O	EEPROM clock output
25	ECS	O	EEPROM latch output
26	BOTTOM	I	Bottom switch signal input
27	TUN_SD	I	Tuner signal detect input
28	TU_DO	I	DO output of Tuner IC
29	TU_CLK	O	I2C clock output for Tuner
30	TU_DI	O	I2C data output for Tuner
31	N.C	-	Not used
32	N.C	-	Not used
33	N.C	-	Not used, open
34	MUTE_S	O	Mute signal output for surround Audio signal
35	DVD_CMD	O	CDM signal output for the DVD module
36	DVD_STAT	I	Status signal input from the DVD module
37	DVD_CLK	I	CLK signal input from the DVD module
38	WIDE1	O	Wide function control signal output
39	MUT_FRNT	O	Mute signal output for Front speaker
40	MUTE_C	O	Mute signal output for Center speaker
41	EPM	I	Signal output for Flash
42	SUB MUTE	O	Mute signal output for Subwoofer
43	HP MUTE	O	Mute signal output for Headphone
44	DVD_MUTE	I	Signal output from DVD module control mute circuit
45	N.C	-	Not used, open
46	N.C	-	Not used, open
47	MUTE_L	O	Mute signal output for the line output
48	VOL_DA	O	Data output for 6ch VOL ASP
49	VOL_CK	O	Clock output for 6ch VOL ASP
50	N.C	-	Not used, open
51	N.C	-	Not used, open

Pin No.	Terminal Name	I/O	Function
52	SS_DAT	O	Super surround IC data output
53	SS_CLK	O	Super surround IC clock data output
54	N.C	-	Not used, open
55	N.C	-	Not used, open
56	N.C	-	Not used, open
57	CMIX	O	DPL II Bass improve output
58	N.C	-	Not used, open
59	N.C	-	Not used, open
60	N.C	-	Not used, open
61	N.C	-	Not used, open
62	VCC	-	Power supply terminal (5V)
63	N.C	-	Not used, open
64	VSS	-	GND
65	N.C	-	Not used, open
66	N.C	-	Not used, open
67	N.C	-	Not used, open
68	DVD_PCNT	O	Control signal output for the power for the DVD module
69	N.C	-	Not used, open
70	PCONT	O	Control signal output for the power control relay
71	MUTE_H	O	Mute signal output for HIC
72	DC DET	I	DC detection signal input
73	N.C	-	Not used, open
74	N.C	-	Not used, open
75	JOG_B	I	Volume jog B signal input
76	JOG_A	I	Volume jog A signal input
77	N.C	-	Not used, open
78	N.C	-	Not used, open
79	N.C	-	Not used, open
80	N.C	-	Not used, open
81	FLD_DA	I	FL driver data input
82	DISC5_LED	O	Disc 5 LED control signal output
83	DISC4_LED	O	Disc 4 LED control signal output
84	DISC3_LED	O	Disc 3 LED control signal output
85	DISC2_LED	O	Disc 2 LED control signal output

Pin No.	Terminal Name	I/O	Function
86	DISC1_LED	O	Disc 1 LED control signal output
87	FLD_RST	O	FL driver reset signal output
88	FLD_CS	O	FL driver latch output
89	FLD_CK	O	FL driver clock output
90	LM_LOUT	O	Level meter left out channel
91	KEY2	I	Key 2 line input
92	LM_ROUT	O	Level meter right output channel
93	DES3	I	DVD region setting signal input
94	DES2	I	DVD region setting signal input (speaker region)
95	DES1	I	DVD region setting signal input (Tuner/RDS/SCART region)
96	AVSS	-	Analog power supply input
97	KEY1	I	Key 1 line input
98	VREF	-	Reference voltage input
99	AVCC	-	Analog power supply input
100	PLAY	I	PLAY switch (CR16) input

27. Parts Location and Replacement Parts List

Notes:

***Important safety notice:**

Components identified by  mark have special characteristics important for safety purpose. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

***Warning:** This product uses a laser diode. Refer to caution statements.

***Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F= Farads (F).**

***Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000K (OHM).**

***The parenthesized indications in the Remarks columns specify the model names and areas. (Refer to the cover page)**

***The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.**

***Reference for O/I book languages are as follows:**

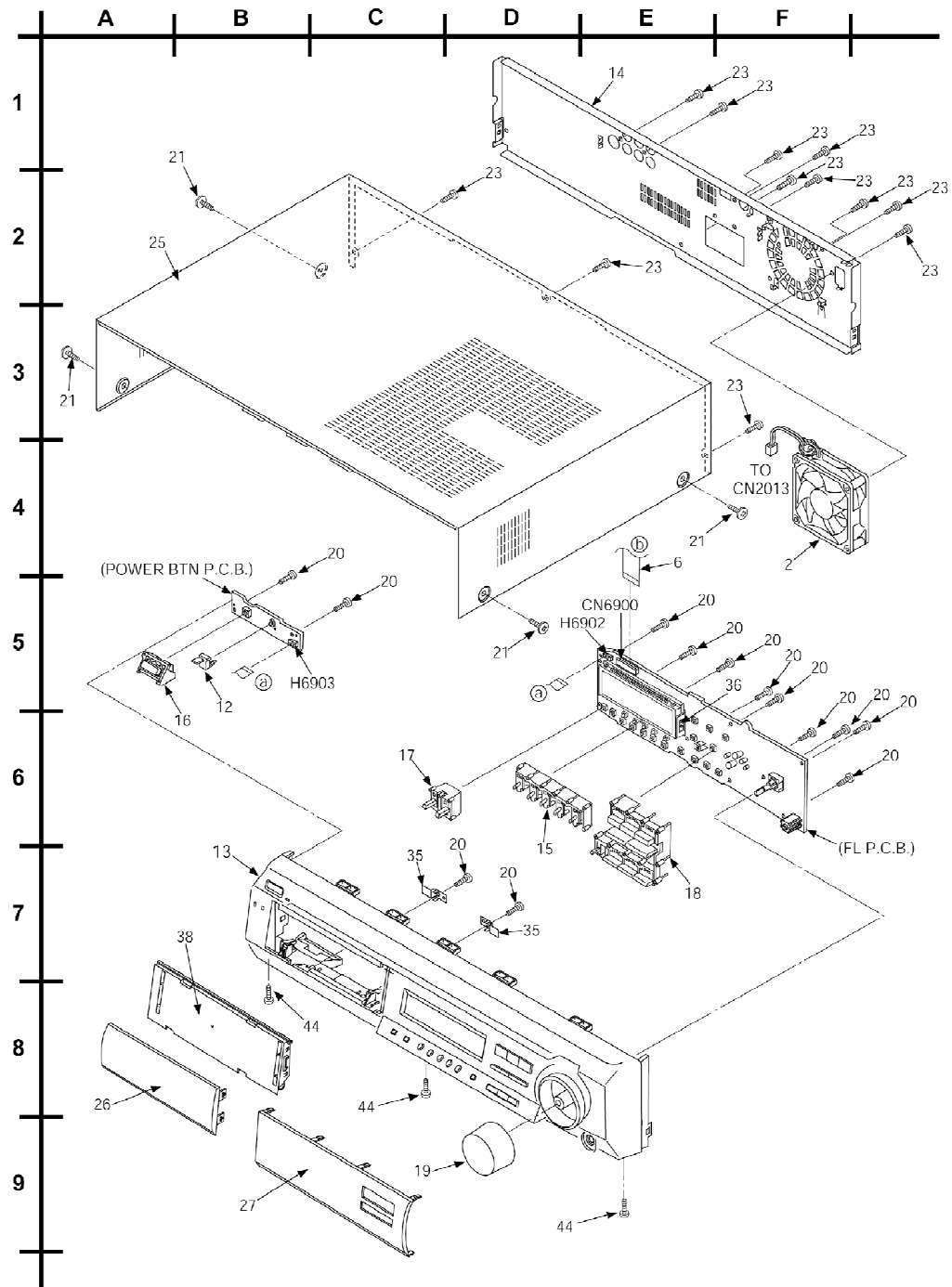
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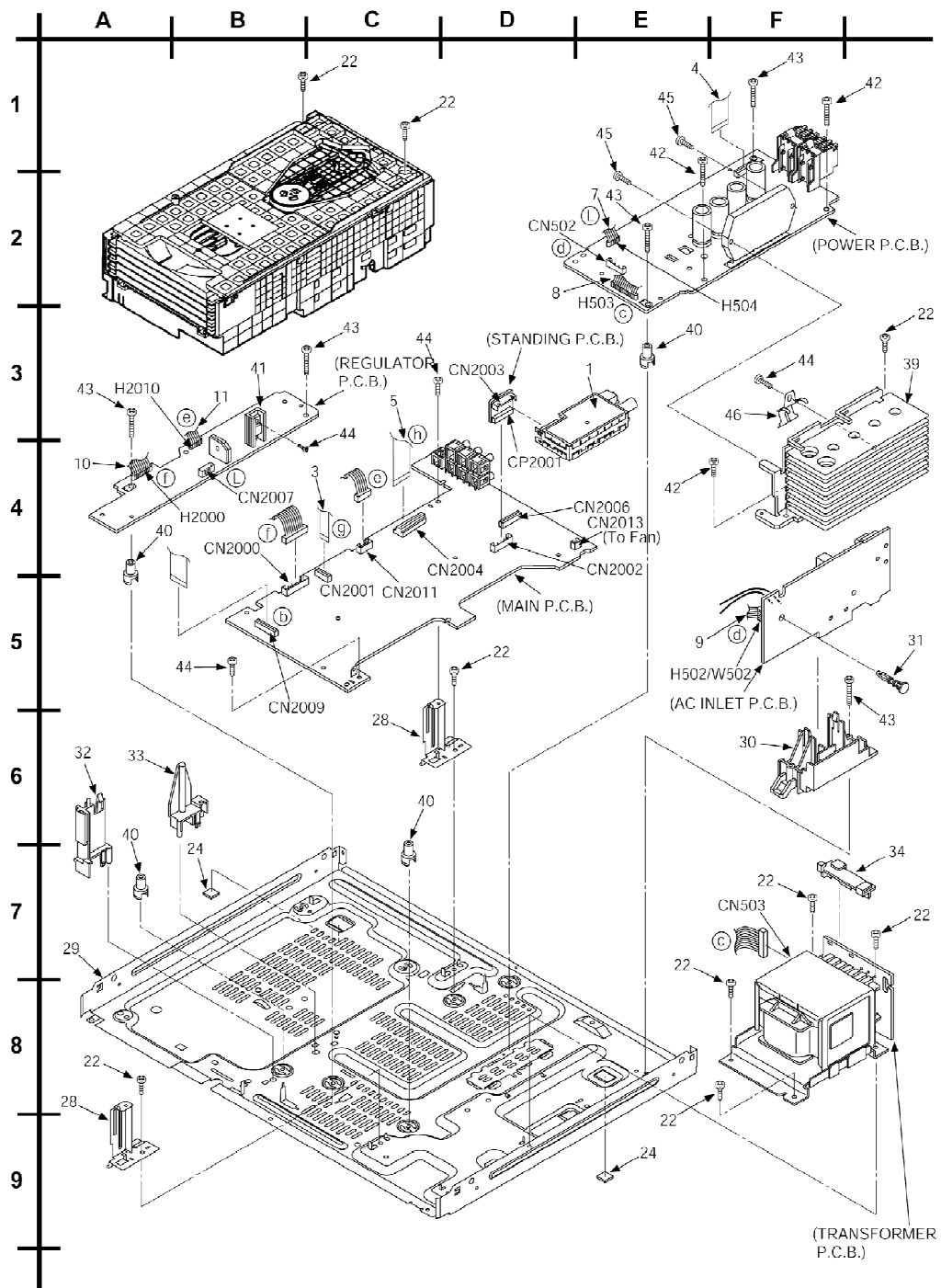
***[M] indicates in the Remarks columns indicates parts supplied by PAVCSG.**

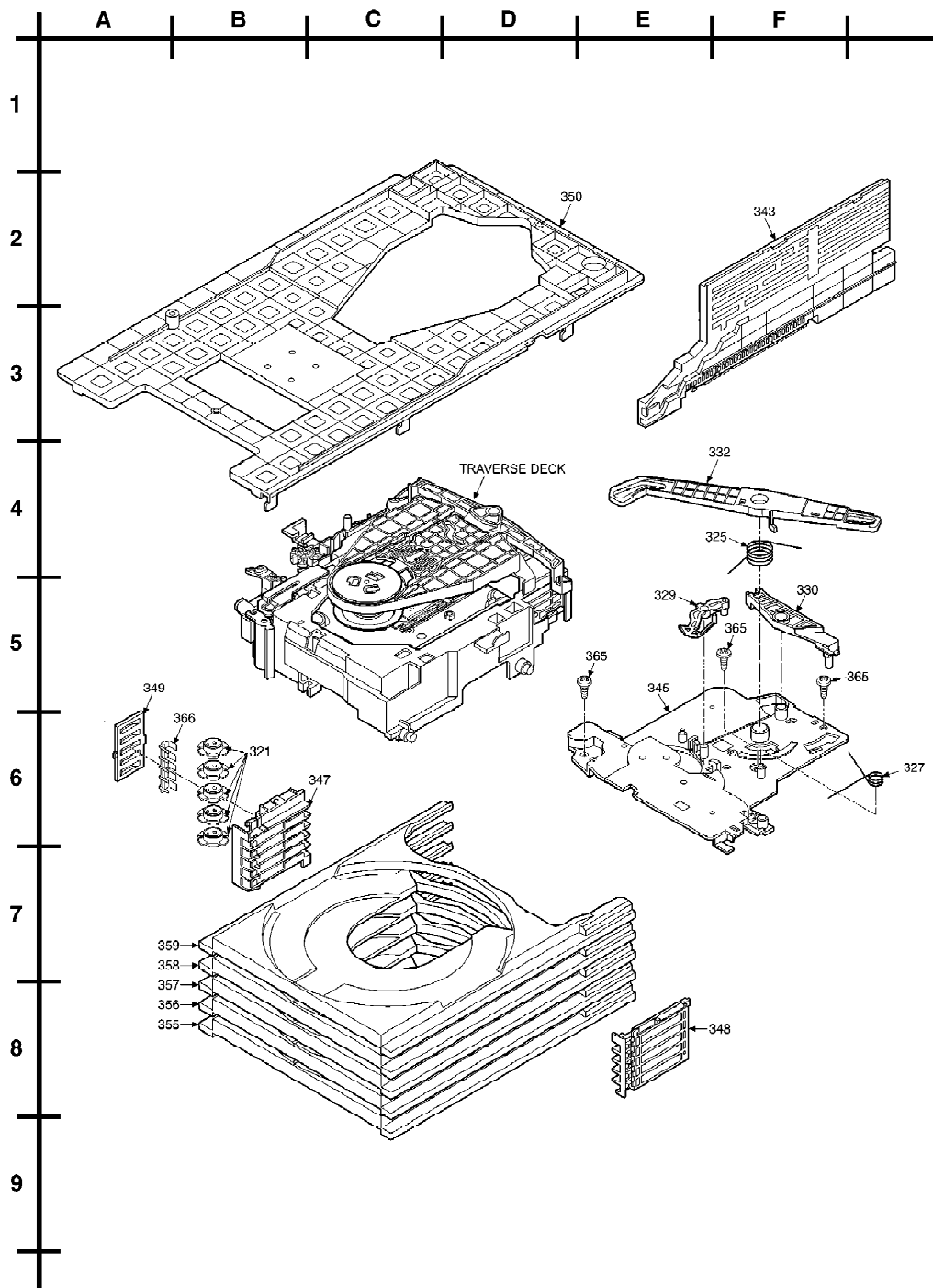
***[SPG] indicates in the Remarks columns indicates parts supplied by SPG [PAVC].**

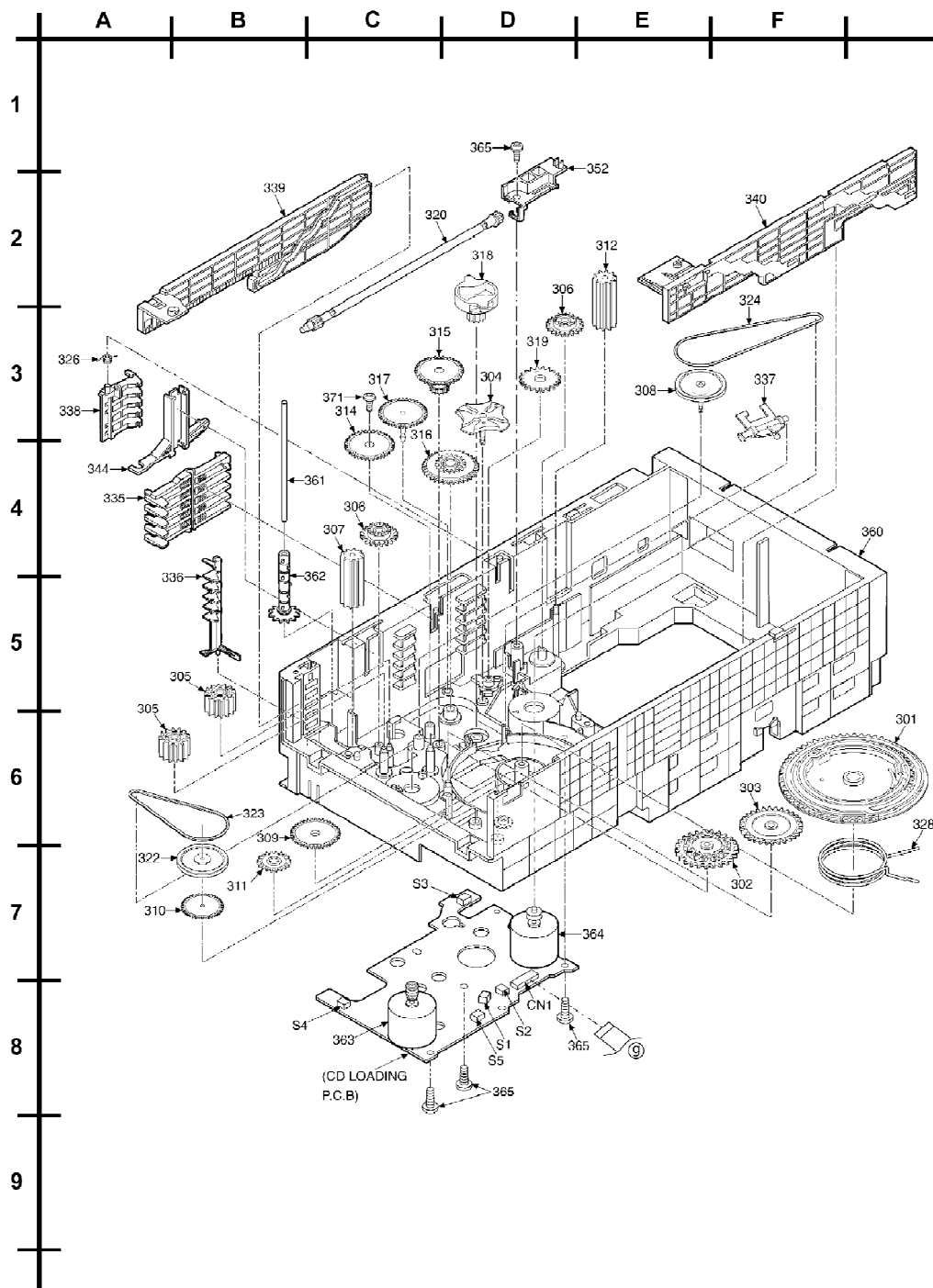
27.1. Loading Mechanism, Traverse Unit & Cabinet

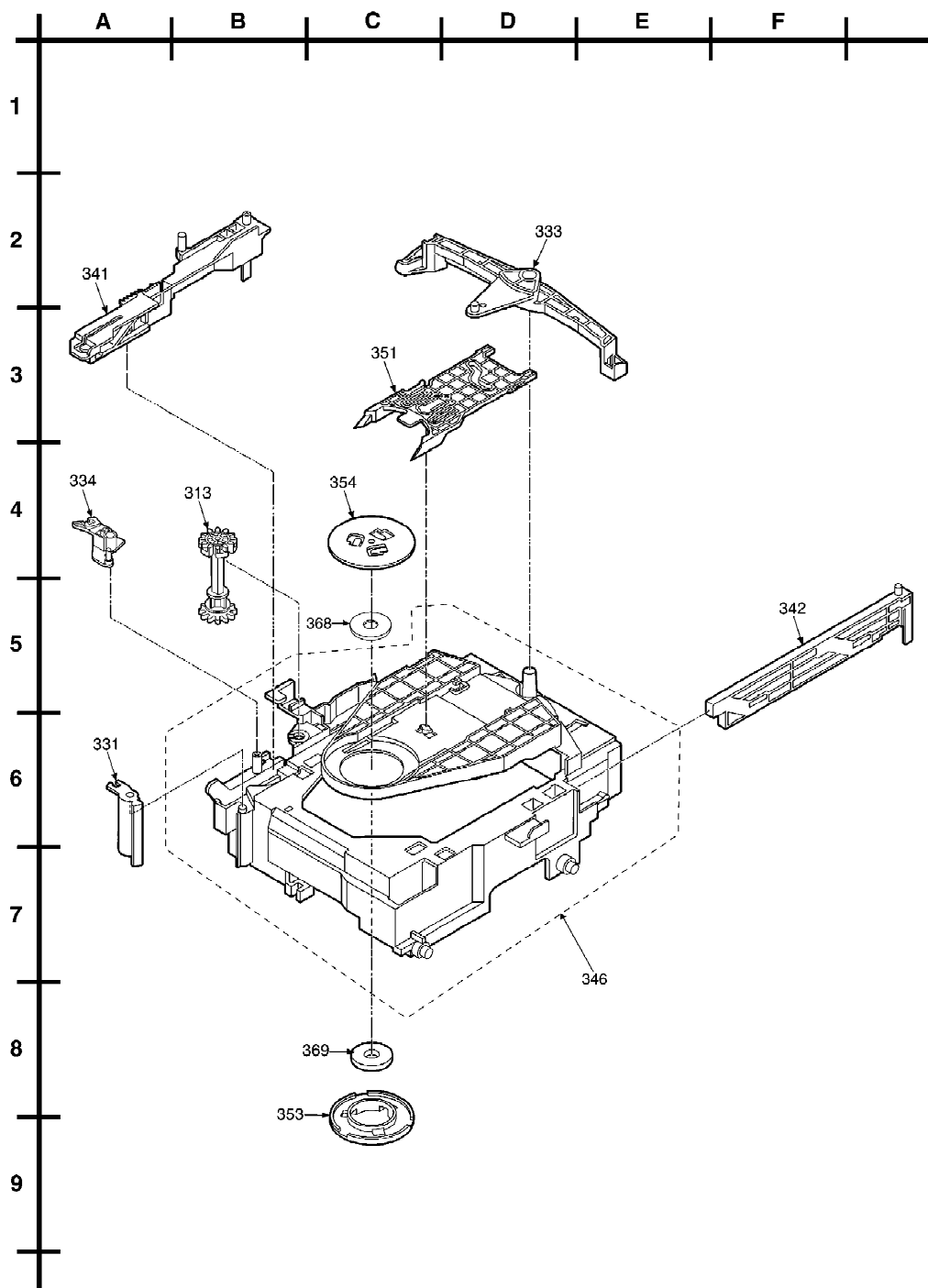
27.1.1. Loading Mechanism, Traverse Unit & Cabinet Parts Location

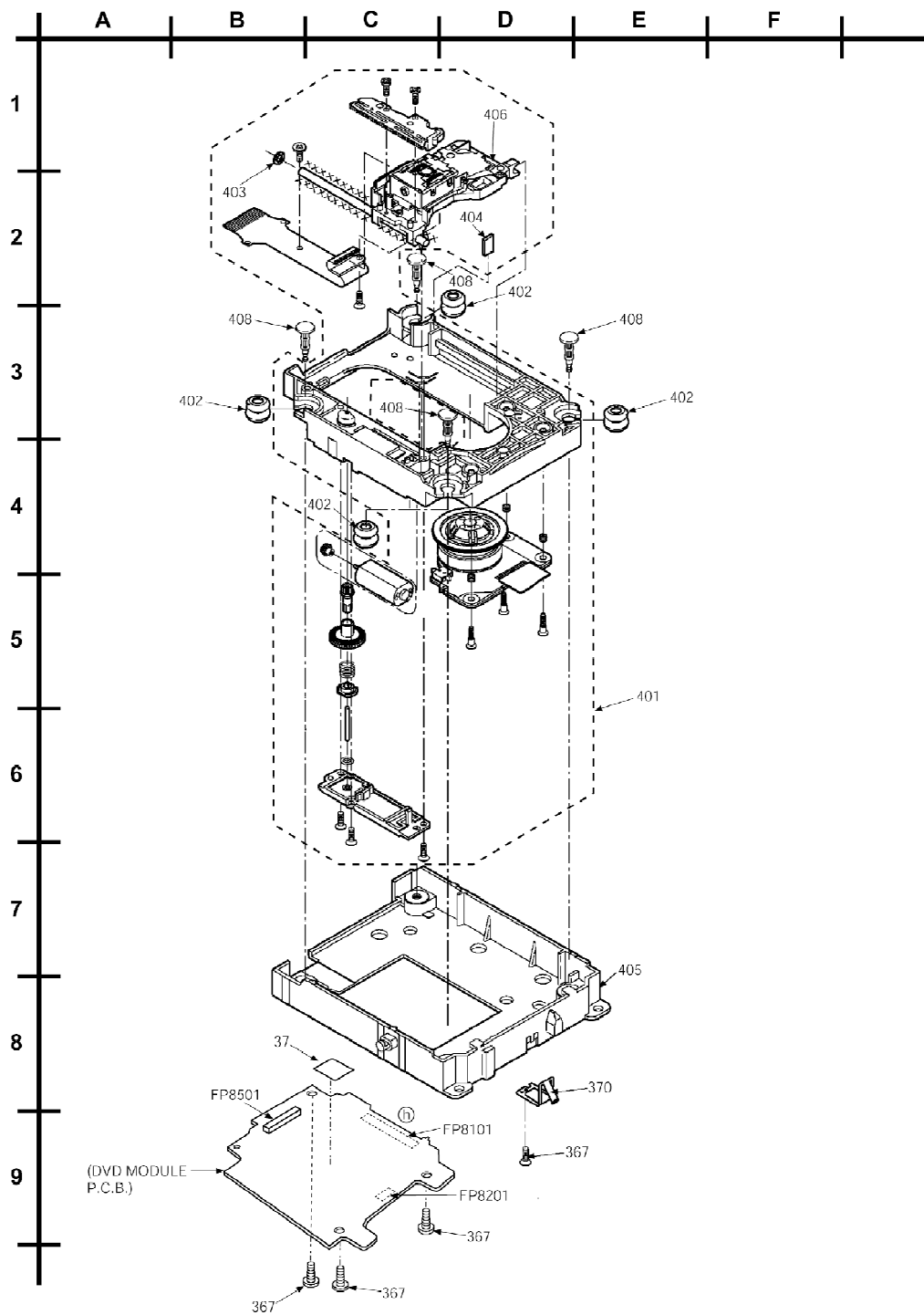












27.1.2. Traverse and Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	J3CCBB000004	TUNER PACK	[M]
2	L6FALEFH0021	FAN UNIT	[M]
3	REEX0319	14P FFC	[M]
4	REEX0320	19P FFC	[M]
5	REEX0439	50P FFC (B/E-MAIN)	[M]
6	REEX0456	26P FFC WIRE (FL)	[M]
7	REXX0394	6P FLAT WIRE (POWER)	[M]
8	REXX0395	12P FLAT WIRE	[M]
9	REXX0396	6P WIRE (TRANS)	[M]
10	REXX0404	12P FLAT WIRE(MAIN)	[M]
11	REXX0411	6P FLAT WIRE	[M]
12	RGLX0106-Q	POWER LIGHT CHIP	[M]
13	RGPX0172A-S	FRONT PANEL	[M]
14	RGRX0034BC1C	REAR PANEL	[M]
15	RGUX0606-Q	5 DISC SELECTION BUTTON	[M]
16	RGUX0607-S	POWER BUTTON	[M]
17	RGUX0608-S	OPEN CLOSE BUTTON	[M]
18	RGUX0610-S	MAIN CONTROL BUTTON	[M]
19	RGWX0092-S	VOLUME KNOB	[M]
20	RHD26046	SCREW	[M]
21	RHD30007-1SJ	SCREW	[M]
22	RHD30102-1	SCREW	[M]
23	RHD30119	SCREW	[M]
24	RKA0059-K	LEG RUBBER	[M]
25	RKMX0097-S	TOP CABINET	[M]
26	RKWX0245-Q	DVD LID ORNAMENT	[M]
27	RKWX0246-Q	FL WINDOW	[M]
28	RMAX0069	MAIN PCB ANGLE	[M]
29	RMKX0092-4	BOTTOM CHASSIS	[M]
30	RMN0638-3	SUB TRANS SUPPORT	[M]
31	RMN0702	PCB SPACER	[M]
32	RMNX0124	MAIN PCB BRACKET (L)	[M]
33	RMNX0125	MAIN PCB BRACKET (C)	[M]
34	RMNX0128	WIRE SUPPORT	[M]
35	RMNX0142	DVD LID SUPPORT	[M]
36	RMNX0143	FL HOLDER	[M]
37	RMX0290	PLASTIC SHEET	[M]
38	RYQX0177-S	DVD LID UNIT	[M]
39	RXXX0045-1	HEAT SINK UNIT	[M]
40	SHE187-6J	PCB SUPPORT	[M]
41	TUC25628	TRANSISTOR HEAT SINK	[M]
42	XTB3+10JFJ	SCREW	[M]
43	XTB3+20JFJ	SCREW	[M]
44	XTB3+8JFJ	SCREW	[M]
45	XTW3+15TFJ	SCREW	[M]
46	RMC0158-S2	TR-FIXTURE	[M]
		TRAVERSE DECK	
301	RDG0519	MAIN GEAR	[M]
302	RDG0520	SPEED UP GEAR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
303	RDG0521	REVERSE GEAR	[M]
304	RDG0522	GENEVA GEAR	[M]
305	RDG0523	HOR RELAY GEAR	[M]
306	RDG0525	CROWN GEAR	[M]
307	RDG0526	TRAY RELAY GEAR	[M]
308	RDG0527	UD PULLEY GEAR	[M]
309	RDG0528	HOR SPEED DOWN GEAR	[M]
310	RDG0529	HOR SPEED DOWN GEAR	[M]
311	RDG0530	HOR DRIVE GEAR	[M]
312	RDG0531	LOAD RELAY GEAR	[M]
313	RDG0532	LOAD GEAR	[M]
314	RDG0535	UD SPEED DOWN GEAR	[M]
315	RDG0534	UD SPEED DOWN GEAR	[M]
316	RDG0536	SELECT SPEED DOWN GE	[M]
317	RDG0537-1	SELECT DRIVE GEAR	[M]
318	RDG0538-1	CHANGE GEAR	[M]
319	RDG0539	UD DRIVE GEAR	[M]
320	RDG0540	TIMING GEAR	[M]
321	RDG0542	TRAY GEAR	[M]
322	RDG0543	HOR PULLEY GEAR	[M]
323	RDV0068	HOR BELT	[M]
324	RDV0069	UD BELT	[M]
325	RME0344-1	UD ASSIST SPRING	[M]
326	RME0361	TRAY STOPPER SPRING	[M]
327	RME0363-1	LIMIT SPRING	[M]
328	RME0368-1	MAIN GEAR SPRING	[M]
329	RML0616	SPEED UP LOCK	[M]
330	RML0617-2	SEPARATE LEVER 1	[M]
331	RML0618-1	SEPARATE LEVER 2	[M]
332	RML0619-1	UD. CONNECTION LEVER	[M]
333	RML0620	TRV.CONNECT LEVER	[M]
334	RML0621-2	TRAY CHG. LEVER	[M]
335	RML0622-1	TRAY LOCK LEVER	[M]
336	RML0623	OPEN SW. LEVER	[M]
337	RML0624	CHG. LEVER	[M]
338	RML0637	TRAY STOPPER	[M]
339	RMM0239-1	UD.RACK (L)	[M]
340	RMM0240	UD.RACK (R)	[M]
341	RMM0241-1	TRV.SLIDE PLATE (L)	[M]
342	RMM0242-1	TRV.SLIDE PLATE (R)	[M]
343	RMM0243	SELECT RACK	[M]
344	RMM0244	SELECT GUIDE	[M]
345	RMQ1051-2	PITCH PLATE	[M]
346	RMQ1209	UD BASE	[M]
347	RMQ1056	TRAY GUIDE (L)	[M]
348	RMQ1057	TRAY GUIDE (R)	[M]
349	RMQ1058	GEAR HOLDER	[M]
350	RMQ1059-2	TOP COVER	[M]
351	RMQ1060	CLAMP GUIDE	[M]
352	RMQ1061	TG.PLATE	[M]
353	RMR1531-X	FIXTURE	[M]
354	RMR1446-X	CLAMPER	[M]
355	RMR1407A-H8	TRAY NO. 1	[M]
356	RMR1407B-H8	TRAY NO. 2	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
357	RMR1407C-H8	TRAY NO. 3	[M]
358	RMR1407D-H8	TRAY NO. 4	[M]
359	RMR1407E-H8	TRAY NO. 5	[M]
360	RFKNAPM77MDS	MECHA BASE ASS'Y	[M]
361	RMS0762	TRAY GEAR SHAFT	[M]
362	RXG0053	TRAY DRIVE GEAR ASSY	[M]
363	RXQ0803	LOADING MOTOR ASS'Y	[M]
364	RXQ0804	UD MOTOR ASSY	[M]
365	XTB3+10J	SCREW	[M]
366	RMC0472	TRAY SPRING	[M]
367	XTV2+6G	SCREW	[M]
368	XWG6FFY	BACK YOKE	[M]
369	JSM0048	MAGNET	[M]
370	RMC0387	SUPPORT SPRING	[M]
371	RHD26045-L	SCREW	[M]
401	RAE2012Z-S	DU69U BLK	[M]
402	RMG0598-A	FLOATING RUBBER	[M]
403	RMG0617-H	CUSHION RUBBER A	[M]
404	RMG0618-H	CUSHION RUBBER B	[M]
405	RMR1596-X2	MIDDLE CHASSIS	[M]
406	RXQ1252	DVD OPU SUB ASS'Y	[M]
408	RMS0789	FIXED PIN	[M]

27.2. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT BOARD	
	REP3867A	DVD MODULE P.C.B.	[M](RTL)
	REPX0464B	MAIN P.C.B.	[M](RTL)
	REPX0464B	STANDING P.C.B.	[M](RTL)
	REPX0464B	REGULATOR P.C.B.	[M](RTL)
	REPX0459A	POWER P.C.B.	[M](RTL)
	REPX0459A	AC INLET P.C.B.	[M](RTL)
	REPX0459A	TRANSFORMER P.C.B.	[M](RTL)
	REPX0462A	FL P.C.B.	[M](RTL)
	REPX0462A	POWER BTN P.C.B.	[M](RTL)
	REP3569A	CD LOADING P.C.B.	[M](RTL)
		INTEGRATED CIRCUITS	
IC11	C0GAG0000007	IC UP/DOWN MOTOR DRIVE	[M]
IC21	C0GAG0000007	IC LOADING MOTOR DRIVE	[M]
IC501	RSN311W64D-P	IC POWER AMP	[M] 
IC2006	C9ZB00000466	IC VIDEO BUFFER	[M]
IC2011	C1BB00000845	IC ASP	[M]
IC2012	C1BB00000979	IC ANALOG SURROUND	[M]
IC2013	C0AABB000125	IC HEADPHONE AMP	[M]
IC2015	C0ABBB000118	IC BUFFER AMP	[M]
IC2018	C2CBJG000578	IC SYSTEM CONTROL	[M]
IC2801	C0DAAZG00012	IC DC-DC CONVERTER	[M]
IC2802	C0CBADG00023	IC 5V REGULATOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC2803	C0DBEZG00021	IC REGULATOR	[M]
IC6901	C0HBB0000044	IC FL DRIVER	[M]
IC8001	MN2DS0003APH	IC DV2.1 LSI	[M]
IC8051	C3ABPG000133	IC 64M DRAM	[M]
IC8111	C0CBCBD00018	IC POWER SUPPLY	[M]
IC8251	C0GBG0000048	IC MOTOR DRIVE	[M]
IC8421	C0FBBK000050	IC AUDIO DAC	[M]
IC8601	C0EBE0000384	IC VOLTAGE DETECTING	[M]
IC8606	C0EBA0000031	IC RESET	[M]
IC8651	RFKWMH82H160	IC FLASH ROM	[SPG]
IC8691	C0JBAA000346	IC AND GATE LOGIC	[M]
IC8695	C0JBAA000346	IC AND GATE LOGIC	[M]
		TRANSISTORS	
Q1	B3NAA0000068	TRANSISTOR	[M]
Q501	B1AACF000117	TRANSISTOR	[M]
Q502	B1AACF000117	TRANSISTOR	[M]
Q503	B1AACF000117	TRANSISTOR	[M]
Q505	B1AACF000117	TRANSISTOR	[M]
Q506	B1GCCFJJ0016	TRANSISTOR	[M]
Q507	B1ACCF000094	TRANSISTOR	[M]
Q508	2SD0592ARA	TRANSISTOR	[M]
Q509	2SD0592ARA	TRANSISTOR	[M]
Q510	B1ACCF000094	TRANSISTOR	[M]
Q511	B1BACG000048	TRANSISTOR	[M]
Q515	B1AACF000117	TRANSISTOR	[M]
Q516	B1GACFJJ0018	TRANSISTOR	[M]
Q517	B1BACG000048	TRANSISTOR	[M]
Q519	B1AACF000117	TRANSISTOR	[M]
Q520	B1GCCFJJ0016	TRANSISTOR	[M]
Q522	2SD0592ARA	TRANSISTOR	[M]
Q523	B1ACCF000094	TRANSISTOR	[M]
Q524	B1BCCG000023	TRANSISTOR	[M]
Q2000	B1GBCFLL0037	TRANSISTOR	[M]
Q2004	B1GBCFJN0033	TRANSISTOR	[M]
Q2023	B1BACD000018	TRANSISTOR	[M]
Q2025	B1GBCFJA0028	TRANSISTOR	[M]
Q2028	B1GBCFJN0033	TRANSISTOR	[M]
Q2102	B1GFGCAA0001	TRANSISTOR	[M]
Q2103	B1GDCFGA0018	TRANSISTOR	[M]
Q2104	B1GFGCAA0001	TRANSISTOR	[M]
Q2105	B1GDCFGA0018	TRANSISTOR	[M]
Q2200	B1GFGCAA0001	TRANSISTOR	[M]
Q2201	B1GDCFGA0018	TRANSISTOR	[M]
Q2500	B1GDCFGA0018	TRANSISTOR	[M]
Q2501	B1GDCFGA0018	TRANSISTOR	[M]
Q2502	B1ABCF000131	TRANSISTOR	[M]
Q2600	B1GDCFGA0018	TRANSISTOR	[M]
Q2601	B1GFGCAA0001	TRANSISTOR	[M]
Q2803	B1BCCG000023	TRANSISTOR	[M]
Q2804	B1ABCE000016	TRANSISTOR	[M]
Q2805	B1ACKD000005	TRANSISTOR	[M]
Q2806	B1ABCE000016	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q2807	B1BCCD000019	TRANSISTOR	[M]
Q2808	B1ADCF000001	TRANSISTOR	[M]
Q2809	B1ACKD000005	TRANSISTOR	[M]
Q2814	B1BACD000018	TRANSISTOR	[M]
Q6501	B1ABCE000016	TRANSISTOR	[M]
Q6502	B1ABCE000016	TRANSISTOR	[M]
Q6902	B1GBCFJN0033	TRANSISTOR	[M]
Q6903	B1GBCFJN0033	TRANSISTOR	[M]
Q6904	B1GBCFJN0033	TRANSISTOR	[M]
Q6905	B1GBCFJN0033	TRANSISTOR	[M]
Q6906	B1GBCFJN0033	TRANSISTOR	[M]
Q8550	2SB1219AHL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	2SB09700RL	TRANSISTOR	[M]
Q8560	2SD1819A0L	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	2SB09700RL	TRANSISTOR	[M]
Q8606	2SD1819A0L	TRANSISTOR	[M]
Q8607	2SD1819A0L	TRANSISTOR	[M]
QR8111	UNR521400L	TRANSISTOR	[M]
QR8112	UNR521400L	TRANSISTOR	[M]
QR8420	UNR521100L	TRANSISTOR	[M]
QR8571	UNR511V00L	TRANSISTOR	[M]
		DIODES	
D500	B0AACK000004	DIODE	[M]
D501	B0JAPG000019	DIODE	[M]
D502	B0JAPG000019	DIODE	[M]
D503	MA2C700A0F	DIODE	[M]
D504	B0AACK000004	DIODE	[M]
D505	B0AACK000004	DIODE	[M]
D506	B0AACK000004	DIODE	[M]
D507	B0AACK000004	DIODE	[M]
D508	B0AACK000004	DIODE	[M]
D509	B0BA5R100013	DIODE	[M]
D510	B0BA5R000004	DIODE	[M]
D511	B0HARM000017	DIODE	[M]
D512	B0HARM000017	DIODE	[M]
D513	B0HARM000017	DIODE	[M]
D514	B0HARM000017	DIODE	[M]
D515	B0EAKM000122	DIODE	[M]
D516	B0EAKM000122	DIODE	[M]
D517	B0HARM000017	DIODE	[M]
D518	B0HARM000017	DIODE	[M]
D519	B0AACK000004	DIODE	[M]
D525	B0BA6R600008	DIODE	[M]
D528	B0EAKM000122	DIODE	[M]
D529	B0EAKM000117	DIODE	[M]
D530	B0EAKM000117	DIODE	[M]
D531	B0AACK000004	DIODE	[M]
D533	B0BA01100004	DIODE	[M]
D534	B0BA01100029	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D599	B0EAKM000122	DIODE	[M]
D2000	B0ACCE000003	DIODE	[M]
D2001	B0ACCE000003	DIODE	[M]
D2002	B0ACCE000003	DIODE	[M]
D2003	B0ACCK000005	DIODE	[M]
D2029	B0BC01000014	DIODE	[M]
D2031	B0ADCJ000020	DIODE	[M]
D2032	B0ADCJ000020	DIODE	[M]
D2037	B0EAKM000117	DIODE	[M]
D2038	B0EAKM000117	DIODE	[M]
D2801	B0JCPD000025	DIODE	[M]
D2802	B0BC7R500001	DIODE	[M]
D2803	B0ACCK000005	DIODE	[M]
D2804	B0BC9R000008	DIODE	[M]
D2807	B0ACCK000005	DIODE	[M]
D2808	B0ACCK000005	DIODE	[M]
D2809	B0EAKM000117	DIODE	[M]
D2810	B0EAKM000117	DIODE	[M]
D2811	B0EAKM000117	DIODE	[M]
D2812	B0EAKM000117	DIODE	[M]
D2813	B0EAKM000117	DIODE	[M]
D2814	B0EAKM000117	DIODE	[M]
D2815	B0EAKM000117	DIODE	[M]
D2816	B0EAKM000117	DIODE	[M]
D2817	B0EAKM000117	DIODE	[M]
D2818	B0BC02900004	DIODE	[M]
D2819	B0ACCK000005	DIODE	[M]
D2822	B0FBAM000010	DIODE	[M]
D2823	B0BC5R000009	DIODE	[M]
D2824	B0BC7R500001	DIODE	[M]
D2827	B0EAKM000117	DIODE	[M]
D2831	B0EAKM000117	DIODE	[M]
D2870	B0ACCK000005	DIODE	[M]
D6501	B0ADCC000002	DIODE	[M]
D6502	B0ADCC000002	DIODE	[M]
D6503	MA2J72800L	DIODE	[M]
D6504	MA2J72800L	DIODE	[M]
D6525	B0BC5R000009	DIODE	[M]
D6900	B3AAA0000583	DIODE	[M]
D6902	B3ACA0000220	DIODE	[M]
D6903	B3ACA0000220	DIODE	[M]
D6904	B3ACA0000220	DIODE	[M]
D6905	B3ACA0000220	DIODE	[M]
D6906	B3ACA0000220	DIODE	[M]
D8231	MA2J11100L	DIODE	[M]
D8550	MA2J11100L	DIODE	[M]
D8571	MA2J72800L	DIODE	[M]
		CHIP INDUCTORS	
LB8001	J0JHC0000045	CHIP INDUCTOR	[M]
LB8002	J0JHC0000045	CHIP INDUCTOR	[M]
LB8301	J0JCC0000119	CHIP INDUCTOR	[M]
LB8302	J0JCC0000119	CHIP INDUCTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB8303	J0JCC0000119	CHIP INDUCTOR	[M]
LB8304	J0JCC0000119	CHIP INDUCTOR	[M]
LB8305	J0JCC0000119	CHIP INDUCTOR	[M]
LB8401	ERJ2GEJ151X	CHIP RESISTOR	[M]
LB8421	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8422	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8423	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8424	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8425	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8426	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8427	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8428	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8429	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8430	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8491	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8502	J0JHC0000045	CHIP INDUCTOR	[M]
LB8503	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8504	J0JCC0000119	CHIP INDUCTOR	[M]
LB8505	J0JCC0000119	CHIP INDUCTOR	[M]
LB8507	J0JCC0000119	CHIP INDUCTOR	[M]
LB8511	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8512	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8513	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8514	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8690	J0JCC0000091	FILTER	[M]
LB8691	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8692	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8693	ERJ2GEJ101X	CHIP RESISTOR	[M]
		VARIABLE RESISTORS	
VR6900	EVEKE2F3524M	VOLUME JOG	[M]
		SWITCHES	
S1	K0L1BA000065	SW STOCK	[M]
S2	K0L1BA000065	SW PLAY	[M]
S3	K0L1BA000078	SW BOTTOM	[M]
S4	RSH1A045-1A	SW TRIGGER SW OPEN	[M]
S5	K0L1BA000065	SW CHANGE	[M]
S6900	EVQ21405R	SW STANDBY	[M]
S6901	EVQ21405R	SW OPEN/CLOSE	[M]
S6902	EVQ21405R	SW DISC CHANGE	[M]
S6903	EVQ21405R	SW DISC1	[M]
S6904	EVQ21405R	SW DISC2	[M]
S6905	EVQ21405R	SW DISC3	[M]
S6906	EVQ21405R	SW DISC4	[M]
S6907	EVQ21405R	SW DISC5	[M]
S6908	EVQ21405R	SW DISC CHECK	[M]
S6909	EVQ21405R	SW F.SKIP	[M]
S6910	EVQ21405R	SW R.SKIP	[M]
S6911	EVQ21405R	SW SELECTOR	[M]
S6912	EVQ21405R	SW PROGRESSIVE	[M]
S6913	EVQ21405R	SW CD/TUNE MODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
S6915	EVQ21405R	SW PLAY	[M]
S6916	EVQ21405R	SW PAUSE	[M]
S6917	EVQ21405R	SW STOP	[M]
		CONNECTORS	
CN1	K1MN14B00066	14P FFC CONNECTOR	[M]
CN501	K1MN19A00036	19P CONNECTOR	[M]
CN502	K1KA06A00177	6P CONNECTOR	[M]
CN503	K1KA12B00044	12P CONNECTOR	[M]
CN2000	K1KA12A00065	12P CONNECTOR	[M]
CN2001	K1MN14A00047	14P FFC CONNECTOR	[M]
CN2002	K1KA10A00263	10P CONNECTOR	[M]
CN2003	K1KA10A00263	10P CONNECTOR	[M]
CN2004	K1MN50A00008	50P CONNECTOR	[M]
CN2006	K1MN19A00036	19P (DECK-MAIN)CONNECTOR	[M]
CN2007	K1KA06A00008	6P CONNECTOR	[M]
CN2009	K1MN26A00022	26P CONNECTOR	[M]
CN2011	K1KA06A00008	6P CONNECTOR	[M]
CN2013	K1KA02A00008	2P CONNECTOR	[M]
CN6900	K1MN26B00045	26P CONNECTOR	[M]
CP2001	K1KB10B00042	10P CONNECTOR	[M]
FP8101	K1MN50B00031	50P CONNECTOR	[M]
FP8201	K1MN06B00080	6P CONNECTOR	[M]
FP8501	K1MN26B00094	26P CONNECTOR	[M]
		COILS & TRANSFORMERS	
L2000	G0C3R3JA0027	COIL	[M]
L2010	ELESN220JA	COIL	[M]
L2011	J0JHC0000045	CHIP CAPACITOR	[M]
L2022	J0JBC0000015	CHIP INDUCTOR	[M]
L2023	J0JBC0000015	CHIP INDUCTOR	[M]
L2024	J0JBC0000015	CHIP INDUCTOR	[M]
L2025	J0JBC0000015	CHIP INDUCTOR	[M]
L2026	J0JBC0000015	CHIP INDUCTOR	[M]
L2027	J0JBC0000015	CHIP INDUCTOR	[M]
L2801	G0ZZ00001930	COIL	[M]
L2803	G0A200D00002	COIL	[M]
L6900	J0JBC0000019	CHIP INDUCTOR	[M]
L6901	J0JBC0000019	CHIP INDUCTOR	[M]
L6902	J0JBC0000019	CHIP INDUCTOR	[M]
L6903	J0JBC0000041	CHIP INDUCTOR	[M]
L8201	G1C100K00020	CHIP INDUCTOR	[M]
L8202	J0JCC0000079	FILTER	[M]
L8301	G1C100KA0055	CHIP INDUCTOR	[M]
L8302	J0JCC0000079	FILTER	[M]
L8550	G1C100KA0055	CHIP INDUCTOR	[M]
T501	G4C7AGD00007	POWER TRANSFORMER	[M] ⚠
T502	G4C2AAJ00005	BACK-UP TRANSFORMER	[M] ⚠



Ref. No.	Part No.	Part Name & Description	Remarks
		COMPONENT COMBINATIONS	
Z501	ERZV10V511CS	ZENER	[M] 
Z6900	B3RAB0000025	REMOTE SENSOR	[M]
		RELAY	
RLY501	K6B1AEA00003	POWER RELAY	[M] 
		OSCILLATORS	
X2000	H2B100500004	CERAMIC RESONATORS	[M]
X8621	H0J270500085	CRYSTAL	[M]
		DISPLAY TUBE	
FL6901	A2BD00000115	FL-DISPLAY	[M]
FL8101	F1H0J1050022	CHIP CAPACITOR	[M]
FL8102	F1H0J1050022	CHIP CAPACITOR	[M]
FL8103	F1H0J1050022	CHIP CAPACITOR	[M]
FL8104	F1J1E1040022	CHIP CAPACITOR	[M]
		FUSE	
F1	K5D502AQ0004	FUSE	[M] 
		FUSE HOLDERS	
FC501	EYF52BCY	FUSE HOLDER	[M]
FC502	EYF52BCY	FUSE HOLDER	[M]
		FUSE PROTECTORS	
FP1	K5G502AA0002	5A FUSE PROTECTOR	[M] 
FP2800	K5G202AA0002	FUSE PROTECTOR	[M] 
		HOLDERS	
H502	RJS1A5506	6P WIRE HOLDER	[M]
H503	K1YF12000002	12P WIRE HOLDER	[M]
H504	K1YZ06000002	WIRE HOLDER	[M]
H2000	K1YZ12000001	12P WIRE HOLDER	[M]
H2010	K1YZ06000002	WIRE HOLDER	[M]
H6902	K1YZ03000010	3P CABLE HOLDER	[M]
H6903	K1YZ03000010	3P CABLE HOLDER	[M]
		JACKS	
JK500	K2AB2B000008	JK AC INLET	[M] 
JK501	K4BC06B00055	JK SPEAKER TERMINAL	[M]
JK502	K4BC06B00055	JK SPEAKER TERMINAL	[M]
JK2001	K1U717B00004	JK COMBO	[M]
JK6901	K2HC103A0023	JK SMALL SIGN	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		EARTH TERMINALS	
E500	SNE1004-2	EARTH TERMINAL	[M]
E501	SNE1004-2	EARTH TERMINAL	[M]
E2800	SNE1004-2	EARTH TERMINAL	[M]
		WIRES	
W1	REEX0354	PRIMARY WIRE	[M]
W2	REEX0355	PRIMARY WIRE	[M]
W6902	RWJ1103160XX	3P WIRE	[M]
		RESISTORS	
R401	ERDS2TJ224T	220K 1/4W	[M]
R402	ERDS2TJ102T	1K 1/4W	[M]
R500	ERC12UGK335D	3.3M 1/2W	[M] ⚠
R501	ERDS2TJ472T	4.7K 1/4W	[M]
R502	ERDS2TJ472T	4.7K 1/4W	[M]
R503	ERDS2TJ153T	15K 1/4W	[M]
R504	ERDS2TJ153T	15K 1/4W	[M]
R505	ERDS2TJ153T	15K 1/4W	[M]
R506	ERDS2TJ153T	15K 1/4W	[M]
R507	ERDS2TJ392T	3.9K 1/4W	[M]
R508	ERDS2TJ392T	3.9K 1/4W	[M]
R509	ERDS2TJ472T	4.7K 1/4W	[M]
R510	ERDS2TJ472T	4.7K 1/4W	[M]
R511	ERDS2TJ153T	15K 1/4W	[M]
R512	ERDS2TJ153T	15K 1/4W	[M]
R513	ERDS2TJ563T	56K 1/4W	[M]
R514	ERDS2TJ563T	56K 1/4W	[M]
R515	ERDS2TJ563T	56K 1/4W	[M]
R516	ERDS2TJ563T	56K 1/4W	[M]
R517	ERDS2TJ563T	56K 1/4W	[M]
R518	ERDS2TJ563T	56K 1/4W	[M]
R519	ERDS2TJ824T	820K 1/4W	[M]
R520	ERDS2TJ223T	22K 1/4W	[M]
R521	ERDS2TJ822T	8.2K 1/4W	[M]
R522	ERDS2TJ223T	22K 1/4W	[M]
R523	ERDS2TJ124T	120K 1/4W	[M]
R524	ERDS2TJ124T	120K 1/4W	[M]
R525	ERDS2TJ154T	150K 1/4W	[M]
R526	ERDS2TJ124T	120K 1/4W	[M]
R527	ERDS2TJ124T	120K 1/4W	[M]
R528	ERDS2TJ154T	150K 1/4W	[M]
R529	ERDS2TJ223T	22K 1/4W	[M]
R530	ERD25FVJ1R0T	1 1/4W	[M]
R531	ERD25FVJ1R0T	1 1/4W	[M]
R532	ERDS2TJ472T	4.7K 1/4W	[M]
R533	ERDS1FVJ100T	10 1/2W	[M]
R534	ERDS1FVJ100T	10 1/2W	[M]
R535	ERDS1FVJ100T	10 1/2W	[M]
R536	ERDS1FVJ100T	10 1/2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R537	ERDS1FVJ100T	10 1/2W	[M]
R538	ERDS1FVJ100T	10 1/2W	[M]
R545	ERDS2TJ224T	220K 1/4W	[M]
R546	ERDS2TJ102T	1K 1/4W	[M]
R547	ERDS2TJ394T	390K 1/4W	[M]
R548	ERDS2TJ334T	330K 1/4W	[M]
R549	ERDS2TJ392T	3.9K 1/4W	[M]
R551	ERDS2TJ472T	4.7K 1/4W	[M]
R552	ERDS2TJ472T	4.7K 1/4W	[M]
R553	ERDS2TJ473T	47K 1/4W	[M]
R554	ERDS2TJ225T	2.2M 1/4W	[M]
R555	ERDS2TJ104T	100K 1/4W	[M]
R556	ERDS2TJ103T	10K 1/4W	[M]
R557	ERDS2TJ103T	10K 1/4W	[M]
R558	ERDS1FVJ392T	3.9K 1/2W	[M]
R559	ERDS2TJ224T	220K 1/4W	[M]
R560	ERDS2TJ682T	6.8K 1/4W	[M]
R561	ERDS2TJ101T	100 1/4W	[M]
R565	ERDS1FVJ392T	3.9K 1/2W	[M]
R566	ERDS2TJ224T	220K 1/4W	[M]
R567	ERDS1FVJ152T	1.5K 1/2W	[M]
R568	ERDS2TJ151T	150 1/4W	[M]
R569	ERDS1FVJ562T	5.6K 1/2W	[M]
R570	ERDS2TJ103T	10K 1/4W	[M]
R578	ERDS2TJ103T	10K 1/4W	[M]
R579	ERDS2TJ332T	3.3K 1/4W	[M]
R580	ERDS2TJ220T	22 1/4W	[M]
R587	ERDS2TJ272T	2.7K 1/4W	[M]
R588	ERDS2TJ151T	150 1/4W	[M]
R589	ERDS2TJ103T	10K 1/4W	[M]
R590	ERDS2TJ102T	1K 1/4W	[M]
R591	ERG2SJ220E	22 2W	[M]
R595	ERDS2TJ102T	1K 1/4W	[M]
R596	ERDS2TJ151T	150 1/4W	[M]
R598	ERD2FCVJ4R7T	4.7 1/4W	[M]
R2000	ERJ3GEYJ221V	220 1/16W	[M]
R2001	ERJ3GEYJ221V	220 1/16W	[M]
R2002	ERJ3GEYJ221V	220 1/16W	[M]
R2003	ERJ3GEYJ221V	220 1/16W	[M]
R2004	ERJ3GEYJ221V	220 1/16W	[M]
R2006	ERJ3GEYJ221V	220 1/16W	[M]
R2007	ERJ3GEYJ102V	1K 1/16W	[M]
R2008	ERJ3GEYJ103V	10K 1/16W	[M]
R2009	ERJ3GEYJ221V	220 1/16W	[M]
R2010	ERJ3GEYJ221V	220 1/16W	[M]
R2012	ERJ3GEYJ221V	220 1/16W	[M]
R2013	ERJ3GEYJ221V	220 1/16W	[M]
R2014	ERJ3GEYJ221V	220 1/16W	[M]
R2015	ERJ3GEYJ221V	220 1/16W	[M]
R2016	ERJ3GEYJ221V	220 1/16W	[M]
R2017	ERJ3GEYJ103V	10K 1/16W	[M]
R2018	ERJ3GEYJ221V	220 1/16W	[M]
R2019	ERJ3GEYJ221V	220 1/16W	[M]
R2020	ERJ3GEYJ223V	22K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2021	ERJ3GEYJ473V	47K 1/16W	[M]
R2022	ERJ3GEYJ473V	47K 1/16W	[M]
R2023	ERJ3GEYJ103V	10K 1/16W	[M]
R2025	ERJ3GEYJ221V	220 1/16W	[M]
R2026	ERJ3GEYJ221V	220 1/16W	[M]
R2027	ERJ3GEYJ103V	10K 1/16W	[M]
R2028	ERJ3GEY0R00V	0 1/16W	[M]
R2029	ERJ3GEYJ221V	220 1/16W	[M]
R2030	ERJ3GEYJ221V	220 1/16W	[M]
R2031	ERJ3GEYJ221V	220 1/16W	[M]
R2032	ERJ3GEYJ221V	220 1/16W	[M]
R2033	ERJ3GEYJ221V	220 1/16W	[M]
R2035	ERJ3GEYJ102V	1K 1/16W	[M]
R2036	ERJ3GEYJ102V	1K 1/16W	[M]
R2037	ERJ3GEYJ102V	1K 1/16W	[M]
R2038	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2041	ERJ3GEYJ221V	220 1/16W	[M]
R2042	ERJ3GEYJ221V	220 1/16W	[M]
R2043	ERJ3GEYJ221V	220 1/16W	[M]
R2047	ERJ3GEYJ221V	220 1/16W	[M]
R2048	ERJ3GEYJ221V	220 1/16W	[M]
R2049	ERJ3GEYJ221V	220 1/16W	[M]
R2050	ERJ3GEYJ221V	220 1/16W	[M]
R2053	ERJ3GEYJ221V	220 1/16W	[M]
R2054	ERJ3GEYJ221V	220 1/16W	[M]
R2055	ERJ3GEYJ102V	1K 1/16W	[M]
R2056	ERJ3GEYJ473V	47K 1/16W	[M]
R2057	ERJ3GEYJ473V	47K 1/16W	[M]
R2058	ERJ3GEYJ563V	56K 1/16W	[M]
R2060	ERJ3GEYJ101V	100 1/16W	[M]
R2061	ERJ3GEYJ221V	220 1/16W	[M]
R2062	ERJ3GEYJ221V	220 1/16W	[M]
R2063	ERJ3GEYJ221V	220 1/16W	[M]
R2064	ERJ3GEYJ101V	100 1/16W	[M]
R2065	ERJ3GEYJ103V	10K 1/16W	[M]
R2066	ERJ3GEYJ103V	10K 1/16W	[M]
R2067	ERJ3GEYJ103V	10K 1/16W	[M]
R2068	ERJ3GEYJ103V	10K 1/16W	[M]
R2069	ERJ3GEYJ223V	22K 1/16W	[M]
R2070	ERJ3GEY0R00V	0 1/16W	[M]
R2071	ERJ3GEY0R00V	0 1/16W	[M]
R2072	ERJ3GEYJ101V	100 1/16W	[M]
R2073	ERJ3GEYJ221V	220 1/16W	[M]
R2074	ERJ3GEYJ393V	39K 1/16W	[M]
R2075	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2076	ERJ3GEYJ104V	100K 1/16W	[M]
R2077	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2078	ERJ3GEYJ471V	470 1/16W	[M]
R2079	ERJ3GEYJ223V	22K 1/16W	[M]
R2080	ERJ3GEYJ103V	10K 1/16W	[M]
R2081	ERJ3GEYJ102V	1K 1/16W	[M]
R2082	ERJ3GEYJ473V	47K 1/16W	[M]
R2083	ERJ3GEYJ681V	680 1/16W	[M]
R2084	ERJ3GEYJ223V	22K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2085	ERJ3GEYJ473V	47K 1/16W	[M]
R2090	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2091	ERJ3GEYJ223V	22K 1/16W	[M]
R2092	ERJ3GEYJ223V	22K 1/16W	[M]
R2100	ERJ3GEYJ223V	22K 1/16W	[M]
R2101	ERJ3GEYJ473V	47K 1/16W	[M]
R2111	ERJ3GEYJ223V	22K 1/16W	[M]
R2116	ERJ3GEYJ104V	100K 1/16W	[M]
R2117	ERJ3GEYJ104V	100K 1/16W	[M]
R2118	ERJ3GEY0R00V	0 1/16W	[M]
R2119	ERJ3GEY0R00V	0 1/16W	[M]
R2129	ERJ3GEYJ103V	10K 1/16W	[M]
R2130	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2140	ERJ3GEYJ123V	12K 1/16W	[M]
R2144	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2145	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2146	ERJ3GEYJ473V	47K 1/16W	[M]
R2147	ERJ3GEYJ220V	22 1/16W	[M]
R2148	ERJ3GEYJ220V	22 1/16W	[M]
R2149	ERJ3GEYJ220V	22 1/16W	[M]
R2150	ERJ3GEYJ220V	22 1/16W	[M]
R2151	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2152	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2153	ERJ3GEYJ100V	10 1/16W	[M]
R2154	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2155	ERJ3GEYJ104V	100K 1/16W	[M]
R2156	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2157	ERJ3GEYJ103V	10K 1/16W	[M]
R2160	ERJ3GEYJ103V	10K 1/16W	[M]
R2161	ERJ3GEYJ473V	47K 1/16W	[M]
R2162	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2163	ERJ3GEYJ102V	1K 1/16W	[M]
R2164	ERJ3GEYJ183V	18K 1/16W	[M]
R2165	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2166	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2167	ERJ3GEYJ123V	12K 1/16W	[M]
R2168	ERJ3GEYJ223V	22K 1/16W	[M]
R2169	ERJ3GEYJ473V	47K 1/16W	[M]
R2170	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2172	ERJ3GEYJ102V	1K 1/16W	[M]
R2173	ERJ3GEYJ103V	10K 1/16W	[M]
R2200	ERJ3GEYJ223V	22K 1/16W	[M]
R2201	ERJ3GEYJ473V	47K 1/16W	[M]
R2211	ERJ3GEYJ223V	22K 1/16W	[M]
R2216	ERJ3GEYJ104V	100K 1/16W	[M]
R2217	ERJ3GEYJ104V	100K 1/16W	[M]
R2226	ERJ3GEYJ123V	12K 1/16W	[M]
R2229	ERJ3GEYJ103V	10K 1/16W	[M]
R2230	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2244	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2245	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2246	ERJ3GEYJ473V	47K 1/16W	[M]
R2247	ERJ3GEYJ220V	22 1/16W	[M]
R2248	ERJ3GEYJ220V	22 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2249	ERJ3GEYJ220V	22 1/16W	[M]
R2250	ERJ3GEYJ220V	22 1/16W	[M]
R2251	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2252	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2253	ERJ3GEYJ100V	10 1/16W	[M]
R2254	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2255	ERJ3GEYJ104V	100K 1/16W	[M]
R2256	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2257	ERJ3GEYJ103V	10K 1/16W	[M]
R2260	ERJ3GEYJ103V	10K 1/16W	[M]
R2261	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2262	ERJ3GEYJ473V	47K 1/16W	[M]
R2263	ERJ3GEYJ102V	1K 1/16W	[M]
R2264	ERJ3GEYJ183V	18K 1/16W	[M]
R2265	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2266	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2267	ERJ3GEYJ563V	56K 1/16W	[M]
R2268	ERJ3GEYJ273V	27K 1/16W	[M]
R2269	ERJ3GEYJ473V	47K 1/16W	[M]
R2271	ERJ3GEYJ102V	1K 1/16W	[M]
R2272	ERJ3GEYJ103V	10K 1/16W	[M]
R2300	ERJ3GEYJ103V	10K 1/16W	[M]
R2301	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2302	ERJ3GEYJ103V	10K 1/16W	[M]
R2303	ERJ3GEYJ393V	39K 1/16W	[M]
R2304	ERJ3GEYJ752V	7.5K 1/16W	[M]
R2305	ERJ3GEYJ102V	1K 1/16W	[M]
R2306	ERJ3GEYJ104V	100K 1/16W	[M]
R2307	ERJ3GEYJ101V	100 1/16W	[M]
R2308	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2309	ERJ3GEYJ563V	56K 1/16W	[M]
R2310	ERJ3GEYJ273V	27K 1/16W	[M]
R2311	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2312	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2400	ERJ3GEYJ103V	10K 1/16W	[M]
R2401	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2402	ERJ3GEYJ103V	10K 1/16W	[M]
R2403	ERJ3GEYJ393V	39K 1/16W	[M]
R2404	ERJ3GEYJ752V	7.5K 1/16W	[M]
R2405	ERJ3GEYJ102V	1K 1/16W	[M]
R2406	ERJ3GEYJ104V	100K 1/16W	[M]
R2407	ERJ3GEYJ101V	100 1/16W	[M]
R2500	ERJ3GEYJ103V	10K 1/16W	[M]
R2501	ERJ3GEYJ753V	75K 1/16W	[M]
R2502	ERJ3GEYJ183V	18K 1/16W	[M]
R2503	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2505	ERJ3GEYJ102V	1K 1/16W	[M]
R2506	ERJ3GEYJ473V	47K 1/16W	[M]
R2507	ERJ3GEYJ103V	10K 1/16W	[M]
R2508	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2509	ERJ3GEYJ563V	56K 1/16W	[M]
R2510	ERJ3GEYJ273V	27K 1/16W	[M]
R2511	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2512	ERJ3GEYJ472V	4.7K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2514	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2515	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2516	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2517	ERJ3GEYJ104V	100K 1/16W	[M]
R2530	ERJ3GEYJ273V	27K 1/16W	[M]
R2531	ERJ3GEYJ393V	39K 1/16W	[M]
R2532	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2600	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2602	ERJ3GEYJ103V	10K 1/16W	[M]
R2603	ERJ3GEYJ153V	15K 1/16W	[M]
R2604	ERJ3GEYJ333V	33K 1/16W	[M]
R2605	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2606	ERJ3GEYJ103V	10K 1/16W	[M]
R2607	ERJ3GEYJ103V	10K 1/16W	[M]
R2608	ERJ3GEYJ104V	100K 1/16W	[M]
R2609	ERJ3GEYJ473V	47K 1/16W	[M]
R2610	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2611	ERJ3GEYJ473V	47K 1/16W	[M]
R2612	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2613	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2614	ERJ3GEYJ102V	1K 1/16W	[M]
R2615	ERJ3GEYJ104V	100K 1/16W	[M]
R2616	ERJ3GEYJ563V	56K 1/16W	[M]
R2617	ERJ3GEYJ563V	56K 1/16W	[M]
R2618	ERJ3GEYJ102V	1K 1/16W	[M]
R2619	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2620	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2621	ERJ3GEYJ563V	56K 1/16W	[M]
R2622	ERJ3GEYJ273V	27K 1/16W	[M]
R2623	ERJ3GEYJ104V	100K 1/16W	[M]
R2624	ERJ3GEYJ104V	100K 1/16W	[M]
R2625	ERJ3GEYJ223V	22K 1/16W	[M]
R2807	ERJ3GEYJ103V	10K 1/16W	[M]
R2811	ERJ3GEYJ681V	680 1/16W	[M]
R2812	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2814	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2815	ERJ3GEYJ332V	3.3K 1/16W	[M]
R2816	ERJ3GEYJ821V	820 1/16W	[M]
R2818	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2819	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2820	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2821	ERJ3GEYJ151V	150 1/16W	[M]
R2822	ERJ3GEYJ471V	470 1/16W	[M]
R2823	ERJ3GEYJ102V	1K 1/16W	[M]
R2824	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2825	ERJ3GEYJ471V	470 1/16W	[M]
R2826	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2827	ERJ3GEYJ102V	1K 1/16W	[M]
R2828	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2829	ERJ3GEYJ561V	560 1/16W	[M]
R2830	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2831	ERJ3GEYJ181V	180 1/16W	[M]
R2832	ERJ3GEYJ181V	180 1/16W	[M]
R2834	ERJ3GEYJ182V	1.8K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2835	ERJ3GEYJ471V	470 1/16W	[M]
R2837	ERD2FCVJ4R7T	4.7 1/4W	[M]
R2844	ERJ3GEYJ102V	1K 1/16W	[M]
R2845	ERJ3GEYJ681V	680 1/16W	[M]
R2847	ERJ3GEYJ471V	470 1/16W	[M]
R2848	ERJ3GEYJ331V	330 1/16W	[M]
R2849	ERJ3GEYJ823V	82K 1/16W	[M]
R2850	ERDS1FVJ8R2T	8.2 1/2W	[M]
R2851	ERJ3GEYJ101V	100 1/16W	[M]
R2852	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2854	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2857	ERJ3GEYJ153V	15K 1/16W	[M]
R2858	ERJ3GEYJ393V	39K 1/16W	[M]
R2861	ERJ3GEYJ103V	10K 1/16W	[M]
R2870	ERJ3GEYJ102V	1K 1/16W	[M]
R2886	D0HB750ZA003	75 3W	[M]
R2887	D0HB750ZA003	75 3W	[M]
R2888	D0HB750ZA003	75 3W	[M]
R2889	D0HB750ZA003	75 3W	[M]
R2890	D0HB750ZA003	75 3W	[M]
R2891	D0HB750ZA003	75 3W	[M]
R2892	ERJ3GEY0R00V	0 1/16W	[M]
R2893	ERJ3GEYJ334V	330K 1/16W	[M]
R2894	ERJ3GEYJ224V	220K 1/16W	[M]
R2895	ERJ3GEYJ103V	10K 1/16W	[M]
R2901	ERJ3GEYJ221V	220 1/16W	[M]
R2919	ERJ3GEYJ103V	10K 1/16W	[M]
R2920	ERJ3GEYJ103V	10K 1/16W	[M]
R6500	ERJ3GEYJ473V	47K 1/16W	[M]
R6501	ERJ3GEYJ104V	100K 1/16W	[M]
R6503	ERJ3GEYJ223V	22K 1/16W	[M]
R6505	ERJ3GEYJ102V	1K 1/16W	[M]
R6508	ERJ3GEYJ101V	100 1/16W	[M]
R6511	ERJ3GEYJ151V	150 1/16W	[M]
R6512	ERJ3GEYJ680V	68 1/16W	[M]
R6514	ERJ3GEYJ101V	100 1/16W	[M]
R6517	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6518	ERJ3GEYJ334V	330K 1/16W	[M]
R6520	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6521	ERJ3GEYJ334V	330K 1/16W	[M]
R6522	ERJ3GEYJ221V	220 1/16W	[M]
R6524	ERJ3GEYJ223V	22K 1/16W	[M]
R6525	ERJ3GEYJ102V	1K 1/16W	[M]
R6526	ERJ3GEYJ102V	1K 1/16W	[M]
R6527	ERJ3GEYJ823V	82K 1/16W	[M]
R6528	ERJ3GEYJ823V	82K 1/16W	[M]
R6529	ERJ3GEYJ223V	22K 1/16W	[M]
R6541	ERJ3GEYJ151V	150 1/16W	[M]
R6544	ERJ3GEYJ104V	100K 1/16W	[M]
R6553	ERJ3GEYJ102V	1K 1/16W	[M]
R6900	ERJ3GEYJ102V	1K 1/16W	[M]
R6901	ERJ3GEYJ102V	1K 1/16W	[M]
R6902	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6903	ERJ3GEYJ182V	1.8K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R6904	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6905	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6906	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6907	ERJ3GEYJ682V	6.8K 1/16W	[M]
R6910	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6913	ERJ3GEYJ223V	22K 1/16W	[M]
R6915	ERJ3GEYJ102V	1K 1/16W	[M]
R6918	ERJ3GEYJ223V	22K 1/16W	[M]
R6919	ERJ3GEYJ223V	22K 1/16W	[M]
R6920	ERJ3GEYJ470V	47 1/16W	[M]
R6922	ERJ3GEYJ102V	1K 1/16W	[M]
R6923	ERJ3GEYJ102V	1K 1/16W	[M]
R6924	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6925	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6926	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6927	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6928	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6929	ERJ3GEYJ682V	6.8K 1/16W	[M]
R6930	ERJ3GEYJ103V	10K 1/16W	[M]
R6934	ERJ3GEYJ104V	100K 1/16W	[M]
R6935	ERJ3GEYJ104V	100K 1/16W	[M]
R6936	ERJ3GEYJ473V	47K 1/16W	[M]
R6937	ERJ3GEYJ473V	47K 1/16W	[M]
R6938	ERJ3GEYJ5R6V	5.6 1/16W	[M]
R6939	ERJ3GEYJ5R6V	5.6 1/16W	[M]
R6940	ERJ3GEYJ181V	180 1/16W	[M]
R6941	ERJ3GEYJ181V	180 1/16W	[M]
R6942	ERJ3GEYJ181V	180 1/16W	[M]
R6943	ERJ3GEYJ181V	180 1/16W	[M]
R6944	ERJ3GEYJ181V	180 1/16W	[M]
R6945	ERJ3GEYJ181V	180 1/16W	[M]
R6946	ERJ3GEYJ181V	180 1/16W	[M]
R6947	ERJ3GEYJ181V	180 1/16W	[M]
R6948	ERJ3GEYJ181V	180 1/16W	[M]
R6949	ERJ3GEYJ181V	180 1/16W	[M]
R6950	ERJ3GEYJ5R6V	5.6 1/16W	[M]
R6951	ERJ3GEYJ5R6V	5.6 1/16W	[M]
R8011	ERJ2GEJ220X	22 2W	[M]
R8021	ERJ2GEJ103X	10K 2W	[M]
R8022	ERJ2GEJ103X	10K 2W	[M]
R8023	ERJ2GEJ473X	47K 2W	[M]
R8041	ERJ2GEJ330X	33 2W	[M]
R8111	ERJ2GEJ223X	22K 2W	[M]
R8112	ERJ2GEJ223X	22K 2W	[M]
R8201	ERJ2GEJ222X	2.2K 2W	[M]
R8231	ERJ2GEJ103X	10K 2W	[M]
R8233	ERJ2GEJ153X	15K 2W	[M]
R8235	ERJ2GEJ822X	8.2K 2W	[M]
R8236	ERJ2GEJ822X	8.2K 2W	[M]
R8241	ERJ2GEJ223X	22K 2W	[M]
R8242	ERJ2GEJ752X	7.5K 2W	[M]
R8243	ERJ2GEJ103X	10K 2W	[M]
R8251	ERJ6GEYJ6R8V	6.8 1/10W	[M]
R8261	ERJ2GEJ823X	82K 2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8262	ERJ2GEJ472X	4.7K 2W	[M]
R8263	ERJ2GEJ823X	82K 2W	[M]
R8264	ERJ2GEJ472X	4.7K 2W	[M]
R8265	ERJ2GE0R00X	0 2W	[M]
R8311	ERJ2RHD242X	2.4K 2W	[M]
R8312	ERJ2RHD102X	1K 2W	[M]
R8313	ERJ2RHD243X	24K 2W	[M]
R8314	ERJ2GE0R00X	0 2W	[M]
R8315	ERJ2GEJ6R8X	6.8 2W	[M]
R8321	ERJ3RBD161V	160 3W	[M]
R8322	ERJ2RKD100X	10 2W	[M]
R8325	ERJ3RBD161V	160 3W	[M]
R8326	ERJ2GE0R00X	0 2W	[M]
R8331	ERJ3RBD161V	160 3W	[M]
R8332	ERJ2RKD100X	10 2W	[M]
R8335	ERJ3RED820V	82 3W	[M]
R8341	ERJ3RED820V	82 3W	[M]
R8401	ERJ2GEJ473X	47K 2W	[M]
R8402	ERJ2GEJ101X	100 2W	[M]
R8404	ERJ2GEJ101X	100 2W	[M]
R8407	ERJ2GEJ101X	100 2W	[M]
R8420	ERJ2GEJ222X	2.2K 2W	[M]
R8421	ERJ2GE0R00X	0 2W	[M]
R8501	ERJ2GE0R00X	0 2W	[M]
R8505	ERJ2GEJ222X	2.2K 2W	[M]
R8506	ERJ2GEJ152X	1.5K 2W	[M]
R8550	ERJ2GEJ752X	7.5K 2W	[M]
R8551	ERJ2GE0R00X	0 2W	[M]
R8552	ERJ2GEJ102X	1K 2W	[M]
R8553	ERJ2GEJ102X	1K 2W	[M]
R8554	ERJ2GEJ680X	68 2W	[M]
R8555	ERJ2GEJ2R2X	2.2 2W	[M]
R8556	ERJ3GEYJ560V	56 1/16W	[M]
R8557	ERJ3GEYJ510V	51 1/16W	[M]
R8558	ERJ2GEJ473X	47K 2W	[M]
R8559	ERJ2GEJ153X	15K 2W	[M]
R8560	ERJ2GEJ102X	1K 2W	[M]
R8561	ERJ2GE0R00X	0 2W	[M]
R8562	ERJ2GEJ102X	1K 2W	[M]
R8563	ERJ2GEJ102X	1K 2W	[M]
R8564	ERJ2GEJ220X	22 2W	[M]
R8565	ERJ2GEJ2R2X	2.2 2W	[M]
R8566	ERJ3GEYJ560V	56 1/16W	[M]
R8567	ERJ3GEYJ510V	51 1/16W	[M]
R8568	ERJ2GEJ473X	47K 2W	[M]
R8569	ERJ2GEJ123X	12K 2W	[M]
R8570	ERJ2GEJ104X	100K 2W	[M]
R8601	ERJ2GEJ102X	1K 2W	[M]
R8606	ERJ2GEJ104X	100K 2W	[M]
R8607	ERJ2GEJ103X	10K 2W	[M]
R8611	ERJ2GEJ101X	100 2W	[M]
R8621	ERJ2GEJ105X	1M 2W	[M]
R8622	ERJ2RHD102X	1K 2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
K8031	ERJ2GE0R00X	CHIP JUMPER	[M]
K8106	ERJ3GEY0R00V	CHIP JUMPER	[M]
K8421	ERJ3GEY0R00V	CHIP JUMPER	[M]
RX8011	D1H88204A024	CHIP RESISTOR	[M]
RX8012	D1H88204A024	CHIP RESISTOR	[M]
RX8013	D1H88204A024	CHIP RESISTOR	[M]
RX8014	D1H88204A024	CHIP RESISTOR	[M]
RX8015	D1H422020001	CHIP RESISTOR	[M]
RX8016	D1H88204A024	CHIP RESISTOR	[M]
RX8017	D1H88204A024	CHIP RESISTOR	[M]
RX8018	D1H88204A024	CHIP RESISTOR	[M]
RX8021	D1H410320002	CHIP RESISTOR	[M]
RX8031	D1H447220001	CHIP RESISTOR	[M]
RX8032	D1H447220001	CHIP RESISTOR	[M]
RX8401	D1H410120001	CHIP RESISTOR	[M]
RX8402	D1H410120001	CHIP RESISTOR	[M]
RX8501	D1H456020001	CHIP RESISTOR	[M]
RX8502	D1H85604A024	CHIP RESISTOR	[M]
RX8503	D1H456020001	CHIP RESISTOR	[M]
RX8504	D1H456020001	CHIP RESISTOR	[M]
RX8611	D1H447220001	CHIP RESISTOR	[M]
W2002	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2004	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2005	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2006	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2008	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2009	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2010	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2012	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2015	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2018	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2020	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2021	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2022	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2023	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2024	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2025	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2026	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2028	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2029	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2032	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2034	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2035	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2036	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2037	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2038	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2039	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2046	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2062	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2092	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2125	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2128	ERJ6GEY0R00V	CHIP RESISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W2430	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2432	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2433	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2434	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2435	ERJ6GEY0R00V	CHIP RESISTOR	[M]
W2991	ERJ3GEY0R00V	CHIP JUMPER	[M]
		CAPACITORS	
C11	F1D1E103A001	0.01 25V	[M]
C12	F2A1C101A234	100 16V	[M]
C21	F1D1E103A001	0.01 25V	[M]
C22	F2A1C101A234	100 16V	[M]
C501	F1D1H102A012	1000P 50V	[M]
C502	F1D1H102A012	1000P 50V	[M]
C503	F1D1H102A012	1000P 50V	[M]
C504	F1D1H681A012	680P 50V	[M]
C505	F1D1H102A012	1000P 50V	[M]
C506	F1D1H102A012	1000P 50V	[M]
C507	F1D1H180A015	18P 50V	[M]
C508	F1D1H180A015	18P 50V	[M]
C509	F1D1H220A015	22P 50V	[M]
C510	F1D1H220A015	22P 50V	[M]
C511	F1D1H220A015	22P 50V	[M]
C512	F1D1H220A015	22P 50V	[M]
C513	F1D1H473A012	0.047 50V	[M]
C514	ECA0JM101B	100 6.3V	[M]
C515	F1B2H103A060	0.01 500V	[M]
C516	F1B2H103A060	0.01 500V	[M]
C517	F1D1C103A007	0.01 16V	[M]
C518	F1D1H473A012	0.047 50V	[M]
C519	F1D1H473A012	0.047 50V	[M]
C520	F1D1H473A012	0.047 50V	[M]
C521	F1D1H473A012	0.047 50V	[M]
C522	F1D1H473A012	0.047 50V	[M]
C523	F1D1H473A012	0.047 50V	[M]
C529	F1D1H1040002	0.1 50V	[M]
C530	F1D1H102A012	1000P 50V	[M]
C531	F1D1H102A012	1000P 50V	[M]
C532	F1D1H102A012	1000P 50V	[M]
C533	F1D1H102A012	1000P 50V	[M]
C534	ECA1HM330B	33 50V	[M]
C536	ECA1EM331B	330 25V	[M]
C537	F1D1H103A046	0.01 50V	[M]
C538	F2J1H100A048	10P 50V	[M]
C539	ECA0JM471B	470 6.3V	[M]
C540	ECEA1CKA100B	10 16V	[M]
C541	ECEA1HKA2R2B	2.2 50V	[M]
C543	F1D1H102A012	1000P 50V	[M]
C544	ECA1HM101B	100 50V	[M]
C545	F1D1H1040002	0.1 50V	[M]
C546	ECA1SM332B	3300 100V	[M]
C547	ECA1SM472B	4700 100V	[M]
C548	ECA1SM472B	4700 100V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C549	ECA1SM332B	3300 100V	[M]
C550	F1D1H103A046	0.01 50V	[M]
C551	F1D1H103A046	0.01 50V	[M]
C553	ECQE1104KF3	0.1 100V	[M]
C554	ECQE1104KF3	0.1 100V	[M]
C555	ECEA1VKA4R7B	4.7 35V	[M]
C556	F1D1H103A046	0.01 50V	[M]
C557	ECEA1CKA220B	22 16V	[M]
C559	F1D1H103A046	0.01 50V	[M]
C560	ECA1HM100B	10 50V	[M]
C569	F1D1H473A012	0.047 50V	[M]
C570	F2A1E1020065	1000P 25V	[M]
C571	F2A1E1020065	1000P 25V	[M]
C572	ECA1HM101B	100 50V	[M]
C573	F1D1H102A012	1000P 50V	[M]
C574	F1D1H103A046	0.01 50V	[M]
C575	F1D1H103A046	0.01 50V	[M]
C576	F1D1H103A046	0.01 50V	[M]
C599	F1B2H103A060	0.01 500V	[M]
C2000	ECJ1VB1C104K	0.1 16V	[M]
C2001	ECJ1VB1C104K	0.1 16V	[M]
C2003	ECEA1AKA220B	22 10V	[M]
C2004	ECJ1VB1E103K	0.01 25V	[M]
C2005	ECA1AM102B	1000 10V	[M]
C2006	ECEA1HKA2R2B	2.2 50V	[M]
C2007	ECJ1VB1C104K	0.1 16V	[M]
C2008	ECJ1VB1C104K	0.1 16V	[M]
C2009	ECEA0JKA101B	100 6.3V	[M]
C2019	ECJ1VB1H331K	330P 50V	[M]
C2020	ECJ1VB1H331K	330P 50V	[M]
C2021	ECJ1VB1H331K	330P 50V	[M]
C2022	ECJ1VB1C223K	0.022 16V	[M]
C2023	ECJ1VB1H221K	220P 50V	[M]
C2024	ECJ1VB1H221K	220P 50V	[M]
C2025	ECJ1VB1E103K	0.01 25V	[M]
C2028	ECJ1VB1A105K	1 10V	[M]
C2029	ECJ1VB1A105K	1 10V	[M]
C2032	ECJ1VB1C104K	0.1 16V	[M]
C2034	ECJ1VB1C104K	0.1 16V	[M]
C2035	ECJ1VB1H103K	0.01 50V	[M]
C2036	ECEA1HKA220I	22 50V	[M]
C2037	ECJ1VB1H103K	0.01 50V	[M]
C2038	ECEA1AKA221I	220 10V	[M]
C2039	ECJ1VB1H103K	0.01 50V	[M]
C2040	F2A0J102A130	1000P 6.3V	[M]
C2042	F2A0J102A130	1000P 6.3V	[M]
C2044	F2A0J102A130	1000P 6.3V	[M]
C2046	ECEA0JKA331B	330 6.3V	[M]
C2047	ECEA0JKA331B	330 6.3V	[M]
C2087	ECA1CAD101XI	100 16V	[M]
C2088	ECJ1VB1H103K	0.01 50V	[M]
C2089	ECEA1HKN4R7B	4.7 50V	[M]
C2090	ECJ1VB1E103K	0.01 25V	[M]
C2100	ECJ1VB1E183K	0.018 25V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2112	ECJ1VB1H471K	470P 50V	[M]
C2120	ECJ1VB1A105K	1 10V	[M]
C2128	ECEA1CKA100I	10 16V	[M]
C2130	ECJ1VB1A154K	0.15 10V	[M]
C2131	ECJ1VB1H332K	3300P 50V	[M]
C2132	ECEA1CKA101B	100 16V	[M]
C2133	ECEA1HKA010I	1 50V	[M]
C2138	ECJ1VC1H221J	220P 50V	[M]
C2149	ECJ1VB1A105K	1 10V	[M]
C2150	ECEA1HKA010I	1 50V	[M]
C2151	ECJ1VC1H101K	100P 50V	[M]
C2152	ECJ1VC1H101K	100P 50V	[M]
C2153	ECEA1CKA101B	100 16V	[M]
C2154	ECJ1VB1E103K	0.01 25V	[M]
C2155	ECJ1VB1H102K	1000P 50V	[M]
C2156	ECJ1VB1A105K	1 10V	[M]
C2157	ECEA1HKA100B	10 50V	[M]
C2160	ECJ1VB1H471K	470P 50V	[M]
C2161	ECJ1VB1C104K	0.1 16V	[M]
C2162	ECJ1VB1C333K	0.033 16V	[M]
C2163	ECEA1HKA3R3I	3.3 50V	[M]
C2164	ECJ1VB1H272K	2700P 50V	[M]
C2165	ECJ1VB1A124K	0.12 10V	[M]
C2166	ECJ1VB1A124K	0.12 10V	[M]
C2167	ECEA1HKA100I	10 50V	[M]
C2168	ECEA1HKA3R3I	3.3 50V	[M]
C2169	ECJ1VB1H471K	470P 50V	[M]
C2170	ECEA1HKA4R7I	4.7 50V	[M]
C2175	ECJ1VC1H470J	47P 50V	[M]
C2176	ECJ1VB1H102K	1000P 50V	[M]
C2200	ECJ1VB1E183K	0.018 25V	[M]
C2210	ECJ1VB1C223K	0.022 16V	[M]
C2211	ECJ1VB1C823K	0.082 16V	[M]
C2212	ECJ1VB1H471K	470P 50V	[M]
C2218	ECJ1VB1A105K	1 10V	[M]
C2219	ECJ1VB1A124K	0.12 10V	[M]
C2220	ECJ1VB1A124K	0.12 10V	[M]
C2228	ECJ1VB1A154K	0.15 10V	[M]
C2229	ECEA1CKA100I	10 16V	[M]
C2231	ECEA1HKA010I	1 50V	[M]
C2232	ECJ1VB1H332K	3300P 50V	[M]
C2238	ECJ1VC1H221J	220P 50V	[M]
C2249	ECJ1VB1A105K	1 10V	[M]
C2250	ECEA1HKA010I	1 50V	[M]
C2251	ECJ1VC1H101K	100P 50V	[M]
C2252	ECJ1VC1H101K	100P 50V	[M]
C2253	ECEA1CKA101B	100 16V	[M]
C2254	ECJ1VB1E103K	0.01 25V	[M]
C2255	ECJ1VB1H102K	1000P 50V	[M]
C2256	ECJ1VB1A105K	1 10V	[M]
C2257	ECEA1HKA100B	10 50V	[M]
C2260	ECJ1VB1H471K	470P 50V	[M]
C2261	ECJ1VB1C104K	0.1 16V	[M]
C2262	ECJ1VB1C333K	0.033 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2263	ECEA1HKA3R3I	3.3 50V	[M]
C2264	ECEA1HKA4R7I	4.7 50V	[M]
C2265	ECJ1VB1H272K	2700P 50V	[M]
C2266	ECEA1HKA100I	10 50V	[M]
C2267	ECEA1HKA4R7I	4.7 50V	[M]
C2269	ECJ1VB1H471K	470P 50V	[M]
C2270	ECJ1VC1H470J	47P 50V	[M]
C2276	ECJ1VB1H102K	1000P 50V	[M]
C2300	ECEA1HKA100B	10 50V	[M]
C2302	ECJ1VB1A105K	1 10V	[M]
C2303	ECEA1HKA3R3I	3.3 50V	[M]
C2310	ECJ1VB1C223K	0.022 16V	[M]
C2320	ECA1HAD0R1XI	0.1 50V	[M]
C2400	ECEA1HKA100B	10 50V	[M]
C2401	ECEA1HKA100I	10 50V	[M]
C2403	ECJ1VB1A105K	1 10V	[M]
C2404	ECEA1HKA3R3I	3.3 50V	[M]
C2405	ECEA1HKA100I	10 50V	[M]
C2500	ECEA1HKA100B	10 50V	[M]
C2501	ECEA1HKA100I	10 50V	[M]
C2502	ECEA1HKA100I	10 50V	[M]
C2503	ECJ1VB1C333K	0.033 16V	[M]
C2504	ECUV1C224KBV	0.22 16V	[M]
C2505	ECEA1HKA010I	1 50V	[M]
C2506	ECJ1VB1E103K	0.01 25V	[M]
C2507	ECJ1VC1H101J	100P 50V	[M]
C2508	ECEA1HKA4R7I	4.7 50V	[M]
C2510	ECJ1VB1H682K	6800P 50V	[M]
C2511	ECEA1HKA010I	1 50V	[M]
C2515	ECEA1HKA4R7I	4.7 50V	[M]
C2516	ECJ1VC1H470J	47P 50V	[M]
C2517	ECEA1HKA4R7I	4.7 50V	[M]
C2521	ECEA1HKA010I	1 50V	[M]
C2522	ECEA1HKA010I	1 50V	[M]
C2600	ECJ1VB1A105K	1 10V	[M]
C2602	ECEA1HKA100I	10 50V	[M]
C2603	ECEA1HKA4R7I	4.7 50V	[M]
C2604	ECJ1VB1H222K	2200P 50V	[M]
C2605	ECJ1VB1A184K	0.18 10V	[M]
C2606	ECJ1VB1A184K	0.18 10V	[M]
C2607	ECUV1C224KBV	0.22 16V	[M]
C2608	ECJ1VB1A124K	0.12 10V	[M]
C2609	ECJ1VB1H682K	6800P 50V	[M]
C2610	ECEA1HKA100B	10 50V	[M]
C2611	ECEA1HKA4R7I	4.7 50V	[M]
C2612	ECEA1HKA4R7I	4.7 50V	[M]
C2613	ECJ1VB1E103K	0.01 25V	[M]
C2615	ECJ1VB1H562K	5600P 50V	[M]
C2616	ECEA1HKA100I	10 50V	[M]
C2617	ECEA1HKA220I	22 50V	[M]
C2618	ECJ1VB1C473K	0.047 16V	[M]
C2620	ECJ1VB1H471K	470P 50V	[M]
C2621	ECJ1VB1H471K	470P 50V	[M]
C2622	ECJ1VB1H471K	470P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2623	ECJ1VB1H471K	470P 50V	[M]
C2800	ECA1EM221B	220 25V	[M]
C2802	ECEA1CKA101B	100 16V	[M]
C2804	ECJ1VC1H101K	100P 50V	[M]
C2805	ECJ1VC1H101K	100P 50V	[M]
C2806	ECJ1VB1H103K	0.01 50V	[M]
C2807	ECJ1VC1H101K	100P 50V	[M]
C2808	ECJ1VC1H101K	100P 50V	[M]
C2809	ECJ1VC1H101K	100P 50V	[M]
C2810	ECJ1VC1H101K	100P 50V	[M]
C2811	ECJ1VB1E103K	0.01 25V	[M]
C2812	ECJ1VC1H101K	100P 50V	[M]
C2813	ECJ1VB1A105K	1 10V	[M]
C2814	ECEA0JKA331B	330 6.3V	[M]
C2815	ECA1CAD101XI	100 16V	[M]
C2816	ECA1JM101B	100 63V	[M]
C2817	ECA1HM101B	100 50V	[M]
C2818	ECJ1VB1H681K	680P 50V	[M]
C2819	ECJ1VB1H681K	680P 50V	[M]
C2820	ECA1HM101B	100 50V	[M]
C2821	ECA1JM101B	100 63V	[M]
C2822	ECA1JM101B	100 63V	[M]
C2823	ECJ1VB1H103K	0.01 50V	[M]
C2824	ECEA1EKA330B	33 25V	[M]
C2825	ECJ1VB1A105K	1 10V	[M]
C2826	ECA1EM332B	3300 25V	[M]
C2827	ECEA1CKA470B	47 16V	[M]
C2828	ECEA0JKA331B	330 6.3V	[M]
C2829	ECJ1VB1H102K	1000P 50V	[M]
C2830	ECEA1CKA101B	100 16V	[M]
C2831	ECJ1VB1H103K	0.01 50V	[M]
C2832	ECEA1CKA101B	100 16V	[M]
C2833	ECJ1VB1C104K	0.1 16V	[M]
C2834	ECA1CM221B	220 16V	[M]
C2835	ECJ1VB1A105K	1 10V	[M]
C2840	EEUFC0J821B	820P 6.3V	[M]
C2842	ECA1HM101B	100 50V	[M]
C2843	ECJ1VB1H103K	0.01 50V	[M]
C2844	ECJ1VB1C104K	0.1 16V	[M]
C2845	ECQB1H104JF4	0.1 50V	[M]
C2846	F2A1E1020065	1000P 25V	[M]
C2847	F2A1E1020065	1000P 25V	[M]
C2848	ECJ1VB1A105K	1 10V	[M]
C2849	ECEA0JKA101B	100 6.3V	[M]
C2850	ECJ1VB1H103K	0.01 50V	[M]
C2857	ECEA1CKA101B	100 16V	[M]
C2858	ECEA1CKA101B	100 16V	[M]
C2901	ECEA1CKA101B	100 16V	[M]
C2902	ECEA1CKA101B	100 16V	[M]
C2903	ECJ1VB1A105K	1 10V	[M]
C2904	ECJ1VB1A105K	1 10V	[M]
C6500	ECJ1VB1H102K	1000P 50V	[M]
C6526	ECJ1VC1H101K	100P 50V	[M]
C6527	ECJ1VC1H101K	100P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C6530	ECJ1VC1H101K	100P 50V	[M]
C6531	ECJ1VC1H101K	100P 50V	[M]
C6564	ECJ1VC1H101K	100P 50V	[M]
C6900	ECJ1VB1H473K	0.047 50V	[M]
C6901	ECJ1VB1H473K	0.047 50V	[M]
C6902	ECJ1VB1H102K	1000P 50V	[M]
C6905	ECEA1HKA220B	22 50V	[M]
C6906	ECEA1HKA220B	22 50V	[M]
C6909	ECJ1VB1H103K	0.01 50V	[M]
C6910	ECEA0JKS101B	100 6.3V	[M]
C6911	ECJ1VB1H103K	0.01 50V	[M]
C6912	ECJ1VC1H101K	100P 50V	[M]
C6913	ECEA1HKS3R3B	3.3 50V	[M]
C6918	ECEA0JKS470B	47 6.3V	[M]
C6922	ECJ1VC1H101K	100P 50V	[M]
C6930	ECEA1HKA010B	1 50V	[M]
C6931	ECEA1HKA010B	1 50V	[M]
C6932	ECEA1HKA220I	22 50V	[M]
C6933	ECEA1HKA010B	1 50V	[M]
C6934	ECEA1HKA010B	1 50V	[M]
C6935	ECEA1HKA2R2B	2.2 50V	[M]
C6936	ECEA1HKA2R2B	2.2 50V	[M]
C6937	ECEA1HKA220I	22 50V	[M]
C6938	ECEA1HKA220I	22 50V	[M]
C6941	ECJ1VC1H101K	100P 50V	[M]
C6942	ECJ1VC1H101K	100P 50V	[M]
C6943	ECJ1VC1H101K	100P 50V	[M]
C6944	ECJ1VC1H101K	100P 50V	[M]
C8001	F2G0J101A066	100P 6.3V	[M]
C8002	F2G0G331A012	330P 4V	[M]
C8003	ECJ0EB1E222K	2200P 25V	[M]
C8004	ECJ0EF1C104Z	0.1 16V	[M]
C8005	ECJ0EF1C104Z	0.1 16V	[M]
C8006	ECJ0EF1C104Z	0.1 16V	[M]
C8007	ECJ0EF1C104Z	0.1 16V	[M]
C8008	ECJ0EF1C104Z	0.1 16V	[M]
C8009	ECJ0EF1C104Z	0.1 16V	[M]
C8010	ECJ0EF1C104Z	0.1 16V	[M]
C8011	ECJ1VB0J105K	1 6.3V	[M]
C8012	ECJ0EF1C104Z	0.1 16V	[M]
C8013	ECJ0EF1C104Z	0.1 16V	[M]
C8014	ECJ0EF1C104Z	0.1 16V	[M]
C8015	ECJ1VB0J105K	1 6.3V	[M]
C8016	ECJ1VB0J105K	1 6.3V	[M]
C8017	ECJ0EF1C104Z	0.1 16V	[M]
C8018	ECJ0EF1C104Z	0.1 16V	[M]
C8019	ECJ1VB0J105K	1 6.3V	[M]
C8020	ECJ0EF1C104Z	0.1 16V	[M]
C8021	ECJ0EF1C104Z	0.1 16V	[M]
C8022	ECJ0EF1C104Z	0.1 16V	[M]
C8023	ECJ1VB0J105K	1 6.3V	[M]
C8024	ECJ1VB0J105K	1 6.3V	[M]
C8025	ECJ0EF1C104Z	0.1 16V	[M]
C8026	ECJ0EB1E222K	2200P 25V	[M]

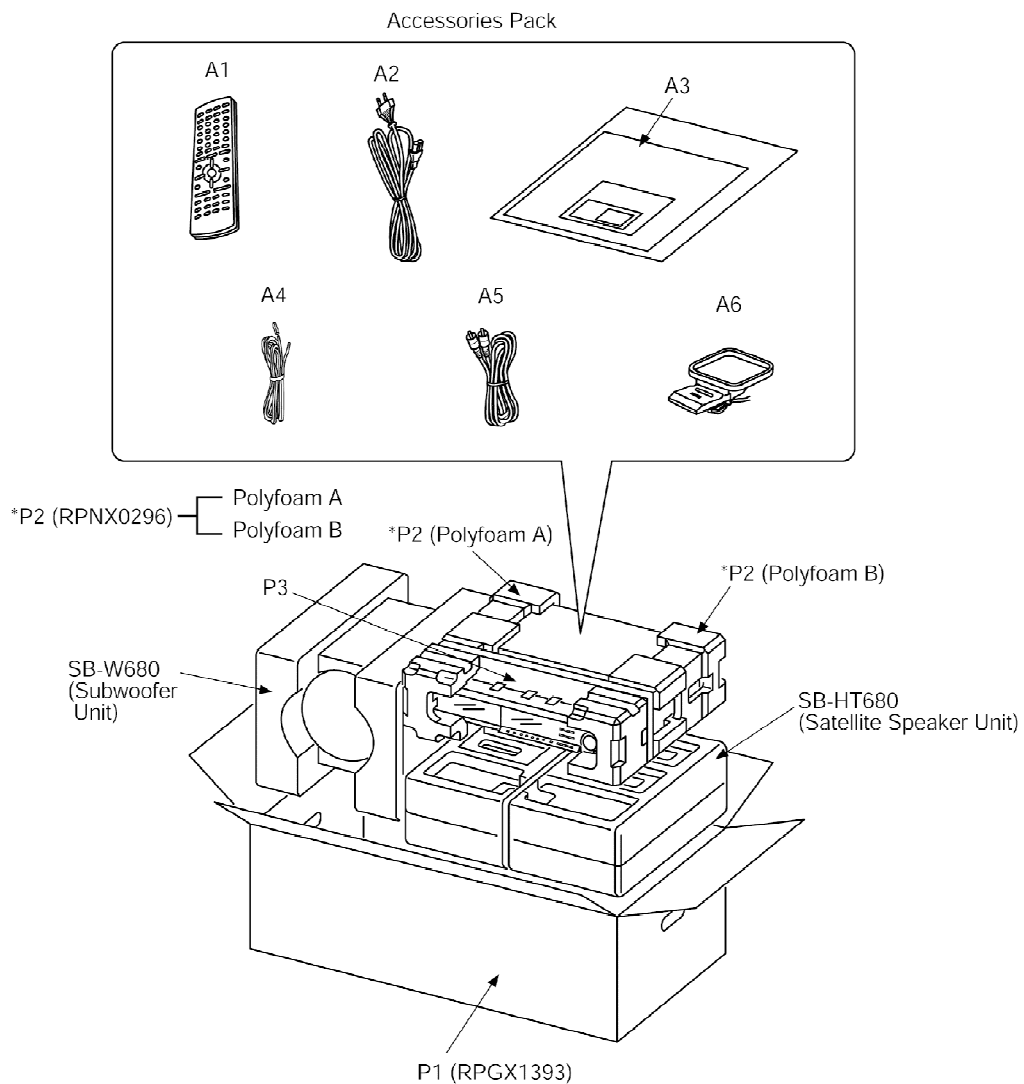
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C8031	ECJ0EF1C104Z	0.1 16V	[M]
C8051	ECJ1VB0J105K	1 6.3V	[M]
C8052	ECJ0EF1C104Z	0.1 16V	[M]
C8053	ECJ0EC1H221J	220P 50V	[M]
C8054	ECJ1VB0J105K	1 6.3V	[M]
C8055	ECJ1VB0J105K	1 6.3V	[M]
C8056	ECJ0EF1C104Z	0.1 16V	[M]
C8057	ECJ0EB1E222K	2200P 25V	[M]
C8111	ECJ0EB1A104K	0.1 10V	[M]
C8112	ECJ1VB0J105K	1 6.3V	[M]
C8113	ECJ0EB1E471K	470P 25V	[M]
C8201	F2H0J101A003	100P 6.3V	[M]
C8202	F2G0J101A066	100P 6.3V	[M]
C8203	ECJ0EF1C104Z	0.1 16V	[M]
C8204	ECJ0EF1C104Z	0.1 16V	[M]
C8205	ECJ0EF1C104Z	0.1 16V	[M]
C8206	ECJ1VB0J105K	1 6.3V	[M]
C8207	ECJ1VF1C104Z	0.1 16V	[M]
C8208	ECJ0EF1C104Z	0.1 16V	[M]
C8211	ECJ0EB1A333K	0.033 10V	[M]
C8212	ECJ0EF1C104Z	0.1 16V	[M]
C8213	ECJ0EF1C104Z	0.1 16V	[M]
C8214	ECJ0EF1C104Z	0.1 16V	[M]
C8215	ECJ0EB1E562K	5600P 25V	[M]
C8216	ECJ0EB1C183K	0.018 16V	[M]
C8217	ECJ1VB0J105K	1 6.3V	[M]
C8218	ECJ1VB0J105K	1 6.3V	[M]
C8221	ECJ0EB1A104K	0.1 10V	[M]
C8222	ECJ0EB1A104K	0.1 10V	[M]
C8223	ECJ0EB1A104K	0.1 10V	[M]
C8224	ECJ0EB1A104K	0.1 10V	[M]
C8225	ECJ0EF1C104Z	0.1 16V	[M]
C8226	ECJ0EF1C104Z	0.1 16V	[M]
C8227	ECJ0EF1C104Z	0.1 16V	[M]
C8228	ECJ1VB0J105K	1 6.3V	[M]
C8229	ECJ1VB0J105K	1 6.3V	[M]
C8232	ECJ1VF1C104Z	0.1 16V	[M]
C8233	ECJ0EB1E472K	4700P 25V	[M]
C8234	ECJ0EF1C104Z	0.1 16V	[M]
C8235	ECJ0EB1H102K	1000P 50V	[M]
C8236	ECJ0EB1H102K	1000P 50V	[M]
C8237	ECJ0EB1H102K	1000P 50V	[M]
C8238	ECJ0EB1H821K	820P 50V	[M]
C8241	ECJ0EB1A104K	0.1 10V	[M]
C8242	ECJ0EB1A104K	0.1 10V	[M]
C8251	F2G0J221A065	220P 6.3V	[M]
C8252	F2G1C470A076	47P 16V	[M]
C8253	F2H1C220A003	22P 16V	[M]
C8254	ECJ0EF1C104Z	0.1 16V	[M]
C8255	ECJ0EF1C104Z	0.1 16V	[M]
C8256	ECJ0EF1C104Z	0.1 16V	[M]
C8257	ECJ0EF1C104Z	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8261	ECJ0EF1C104Z	0.1 16V	[M]
C8262	ECJ0EF1C104Z	0.1 16V	[M]
C8301	F2H0J2210006	220P 6.3V	[M]
C8302	F2H0J330A003	33P 6.3V	[M]
C8303	ECJ0EF1C104Z	0.1 16V	[M]
C8304	ECJ1VB0J105K	1 6.3V	[M]
C8307	ECJ0EF1C104Z	0.1 16V	[M]
C8308	ECJ0EC1H150J	15P 50V	[M]
C8311	ECJ0EF1C104Z	0.1 16V	[M]
C8312	ECJ1VB0J105K	1 6.3V	[M]
C8421	F2G0J101A083	100P 6.3V	[M]
C8422	ECJ0EF1C104Z	0.1 16V	[M]
C8423	F2G0J330A083	33P 6.3V	[M]
C8424	ECJ0EF1C104Z	0.1 16V	[M]
C8426	ECJ0EF1C104Z	0.1 16V	[M]
C8427	ECJ0EF1C104Z	0.1 16V	[M]
C8428	ECJ0EF1C104Z	0.1 16V	[M]
C8501	ECJ3YB1A106M	10 10V	[M]
C8502	ECJ0EF1C104Z	0.1 16V	[M]
C8503	ECJ0EF1C104Z	0.1 16V	[M]
C8504	ECJ0EF1C104Z	0.1 16V	[M]
C8505	ECJ0EC1H221J	220P 50V	[M]
C8506	ECJ0EC1H101J	100P 50V	[M]
C8550	F2H0J330A003	33P 6.3V	[M]
C8551	ECJ0EF1C104Z	0.1 16V	[M]
C8552	F2G1C100A072	10P 16V	[M]
C8553	F2H0J470A003	47P 6.3V	[M]
C8554	ECJ1VB0J105K	1 6.3V	[M]
C8561	ECJ0EF1C104Z	0.1 16V	[M]
C8562	F2G1C100A072	10P 16V	[M]
C8563	F2H0J470A003	47P 6.3V	[M]
C8564	ECJ1VB0J105K	1 6.3V	[M]
C8601	ECJ0EF1C104Z	0.1 16V	[M]
C8606	ECJ0EF1C104Z	0.1 16V	[M]
C8607	ECJ0EB0J224K	0.22 6.3V	[M]
C8611	ECJ0EF1C104Z	0.1 16V	[M]
C8621	ECJ0EC1H120J	12P 50V	[M]
C8622	ECJ0EC1H120J	12P 50V	[M]
C8651	ECJ0EF1C104Z	0.1 16V	[M]
C8652	ECJ0EF1C104Z	0.1 16V	[M]
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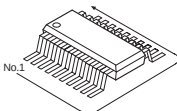
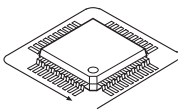
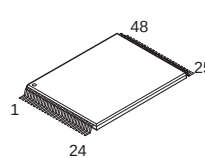
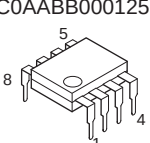
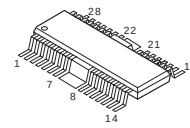
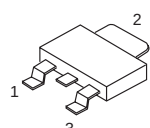
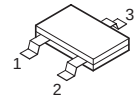
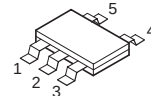
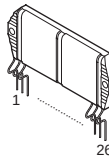
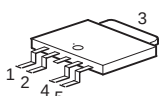
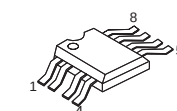
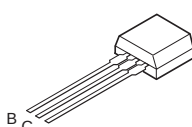
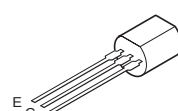
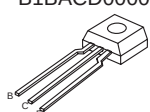
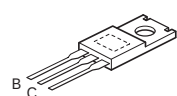
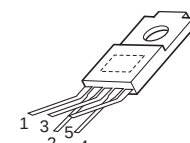
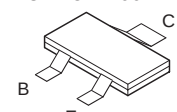
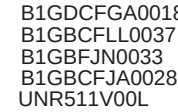
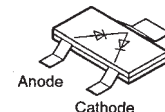
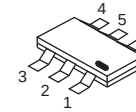
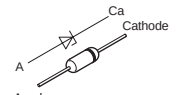
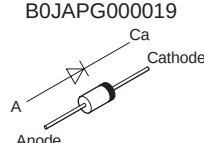
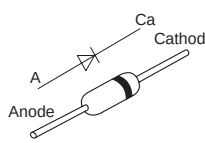
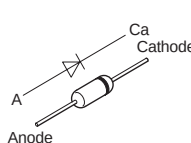
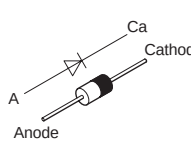
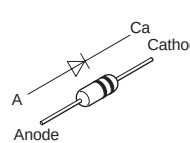
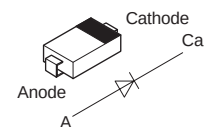
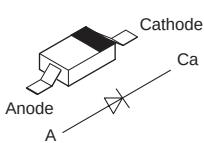
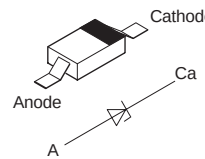
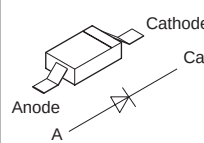
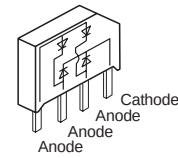
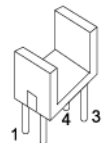
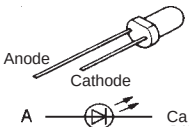
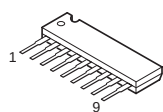
27.3. Packing Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX1393	PACKING CASE	[M]
P2	RPNX0296	POLYFOAM	[M]
P3	RPFX0058	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	EUR7722XG0	REMOTE CONTROL	[M]
A1-1	UR76EC3103A	R/C BATTERY COVER	[M]
A2	K2CB2CB00018	AC CORD	[M] 
A3	RQT7971-M	O/I BOOK (SP)	[M]
A4	RSA0007-L	FM INDOOR ANTENNA	[M]
A5	K2KA2BA00001	VIDEO CABLE	[M]
A6	N1DAAA00001	AM LOOP ANTENNA	[M]

27.4. Packaging



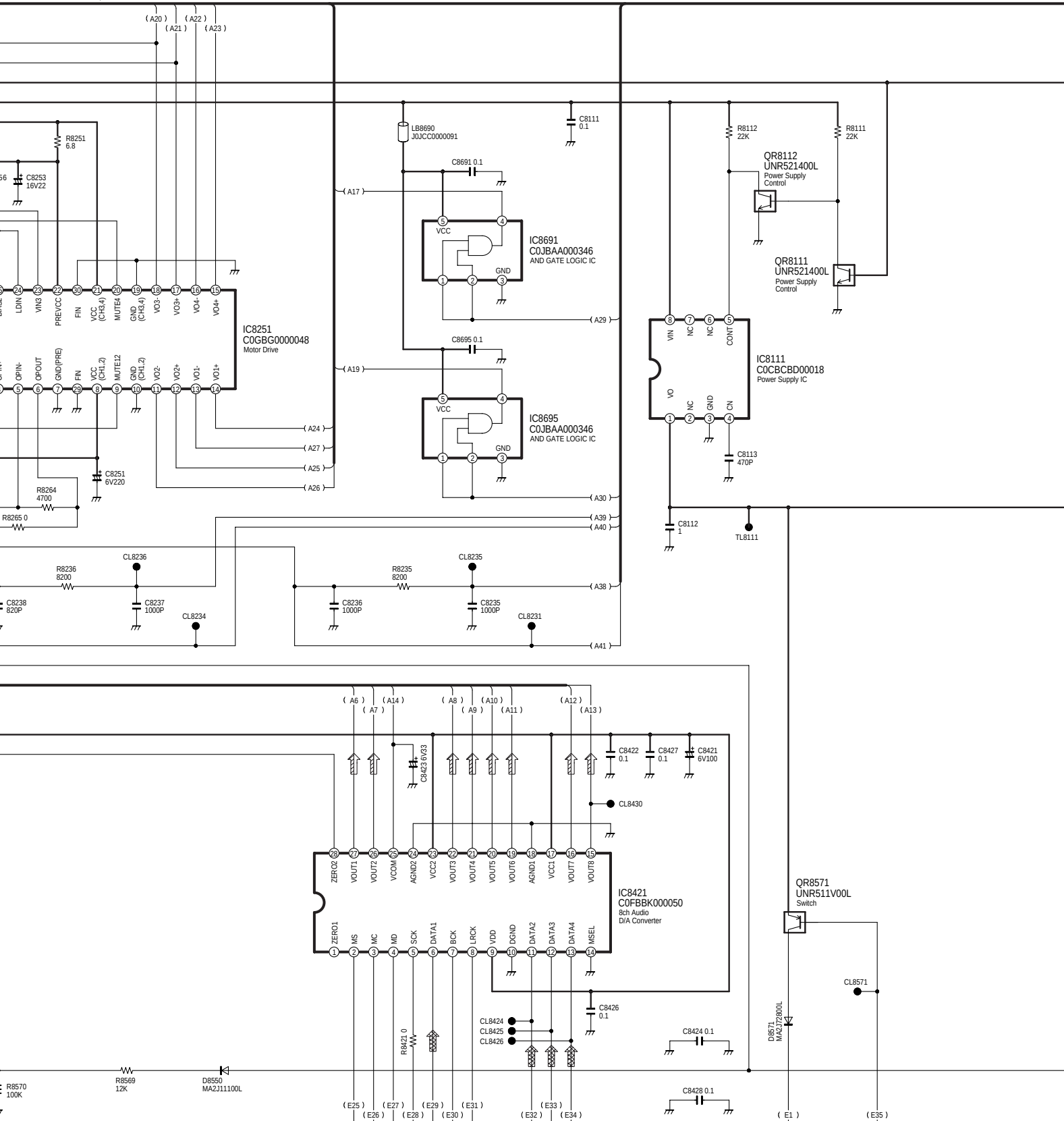
28. Schematic Diagram for printing with letter size

 No.1	C0CBCBD00018 (8p) C0FBBK000050 (28p) C9ZB00000466 (16p) C1BB00000979 (20p) C3ABPG000133 (54p) C0ABBB000118(8p)	 No.1	C1BB00000845 (80p) MN2DS0003APH (256p) C2CBJG000578(100p) C0HBB0000044(40p)	 48 25 24 1	RFKWMH82H160	 5 8 1 4	C3EBGC000044 C0AABB000125				
 28 22 21 15 1 7 8 14	C0GBG0000048	 2 1 3	C0CBADG00023	 3 1 2	C0EBE0000384	 5 4 1 2 3	C0EBA0000031 C0JBAA000346	 1 26	RSN311W64D-P	 3 1 2 4 5	C0DBEZG00021
 8 5 1 4	C3EBEG000072	 B C E	B1BCCD000019	 E C B	2SD0592ARA B1ACKD000005	 A E	B1AACF000117 B1ACCF000094 B1GACFJJ0018 B1BACD000018		B1GCCFJJ0016	 B C E	B1BACG000048 B1BCCG000023
 1 3 5 2 4	C0DAAZG00012	 C B E	2SB09700RL 2SB1219AHL 2SD1819A0L UNR521400L	 Anode Cathode	B1ADCF000001 B1ABCE000016 B1ABCE000131 B1GDCFGA0018 B1GBCFLL0037 B1GBFJN0033 B1GBCFJA0028 UNR511V00L UNR521100L	 Anode Cathode	B0ADCC000002 B0ADCJ000020	 4 5 6 3 2 1	B1GFGCAA0001	 A Ca Cathode Anode	B0BA5R100013 B0BA6R600008 B0BA01100004 B0BA5R000004 B0BA01100029
 A Ca Cathode Anode	B0EAKM000117 B0EAKM000122 B0JAPG000019	 A Ca Cathode Anode	MA2J72800L	 A Ca Cathode Anode	B0AACK000004	 A Ca Cathode Anode	B0HARM000017	 A Ca Cathode Anode	MA2C700A0F	 Cathode Ca Anode A	B0JCPD000025
 Cathode Ca Anode A	B0BC01000014 B0BC02900004	 Cathode Ca Anode A	B0ACCE000003 B0ACCK000005 B0BC9R000008 B0BC7R500001 B0BC5R000009	 Cathode Ca Anode A	MA2J11100L	 Cathode Anode Anode Anode	B0FBAM000010	 1 2 4 3	B3NAA0000068		
 Anode Cathode A	B3ACA0000220 B3AAA0000583	 1 9	COGAG0000007								

A DVD MODULE CIRCUIT



SIGNAL LINE :DVD(AUDIO) SIGNAL LINE



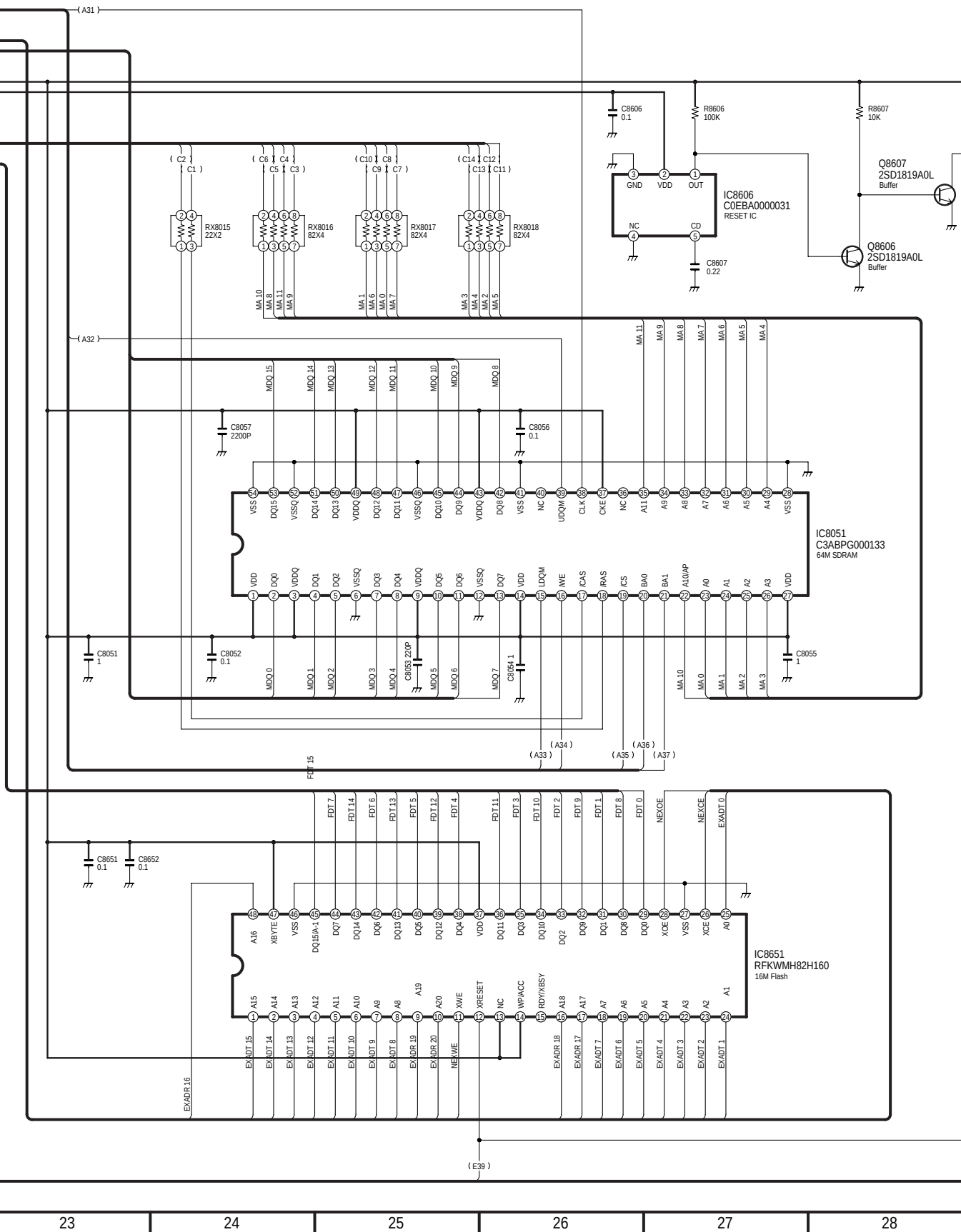
SA-HT680PL DVD MODULE CIRCUIT

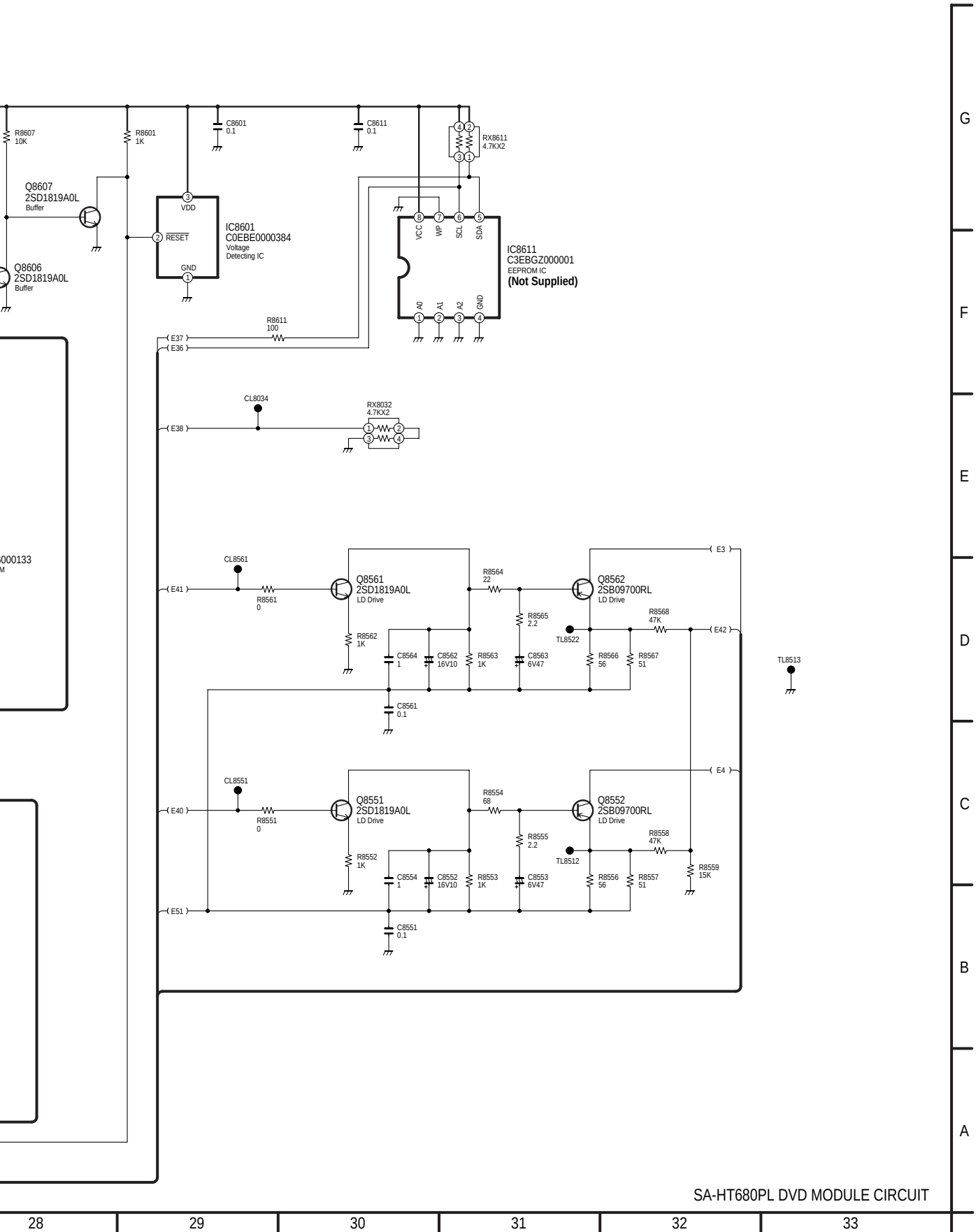
A DVD MODULE CIRCUIT



SCHEMATIC DIAGRAM-3

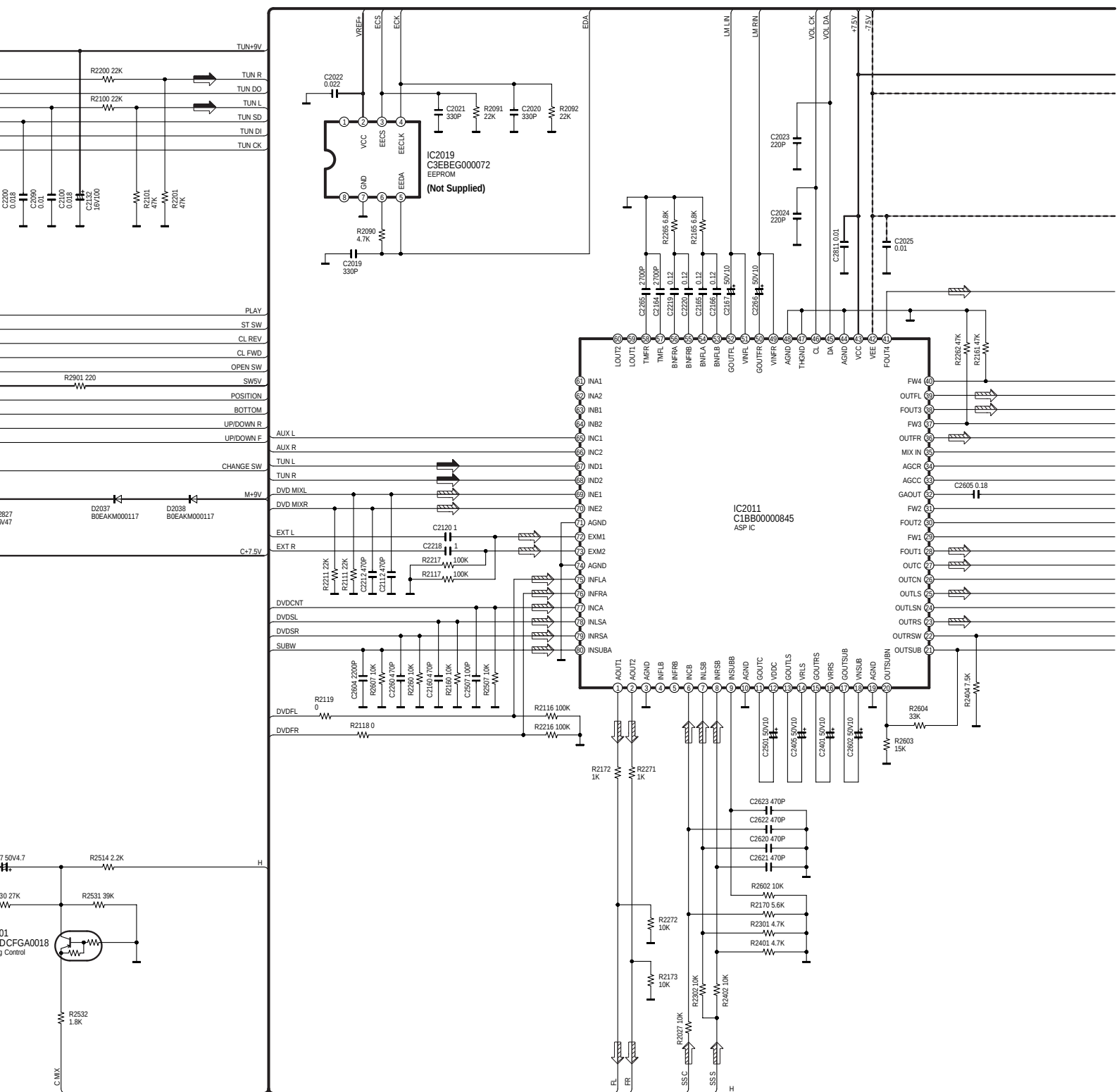
A DVD MODULE CIRCUIT





B MAIN CIRCUIT





76

B MAIN CIRCUIT

 :MAIN SIGNAL LINE





B MAIN CIRCUIT

 :DVD(VIDEO) SIGNAL LINE





B MAIN CIRCUIT

 :MAIN SIGNAL LINE



D



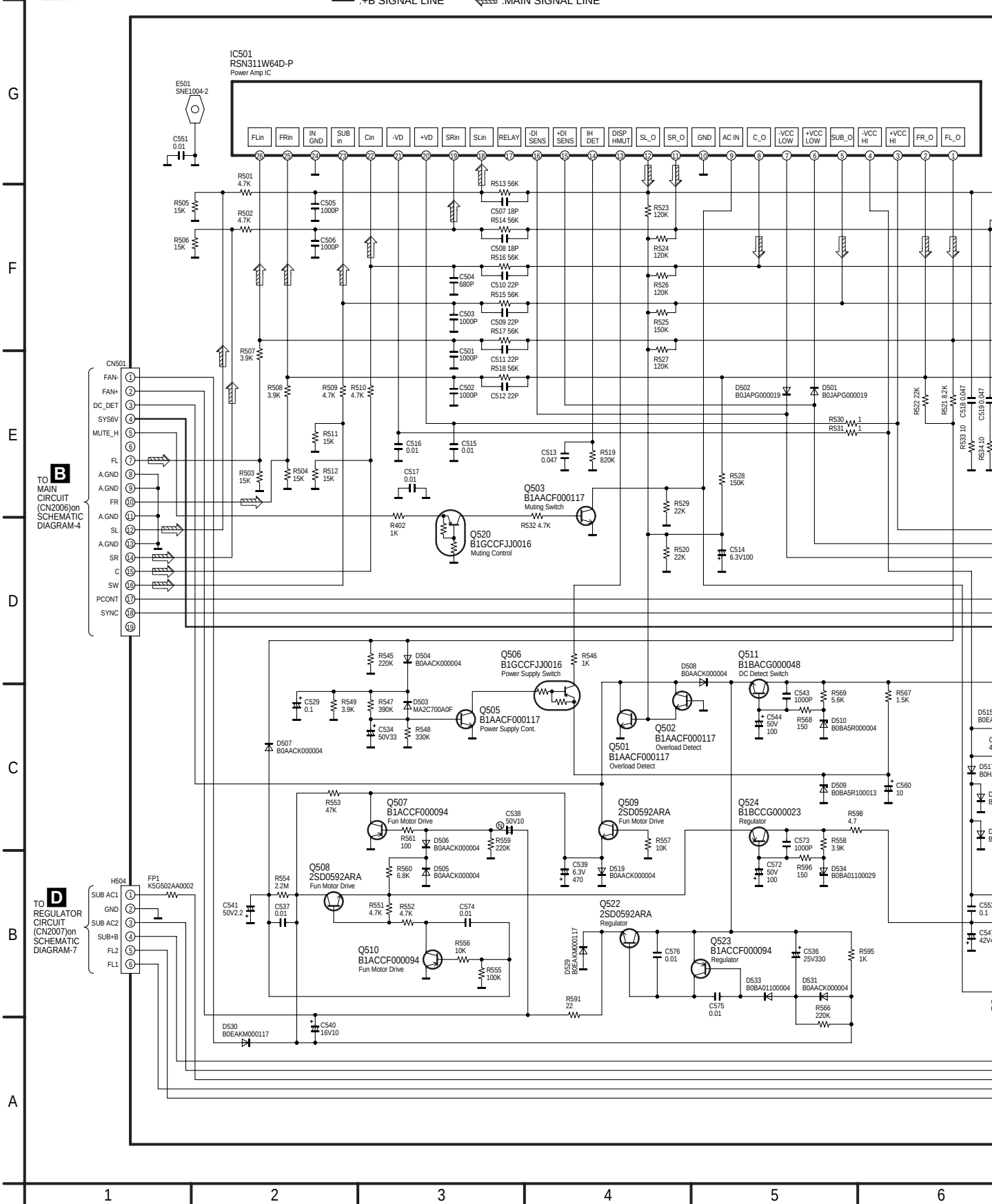
44

SCHEMATIC DIAGRAM-8

E

POWER CIRCUIT

— :+B SIGNAL LINE ← :MAIN SIGNAL LINE

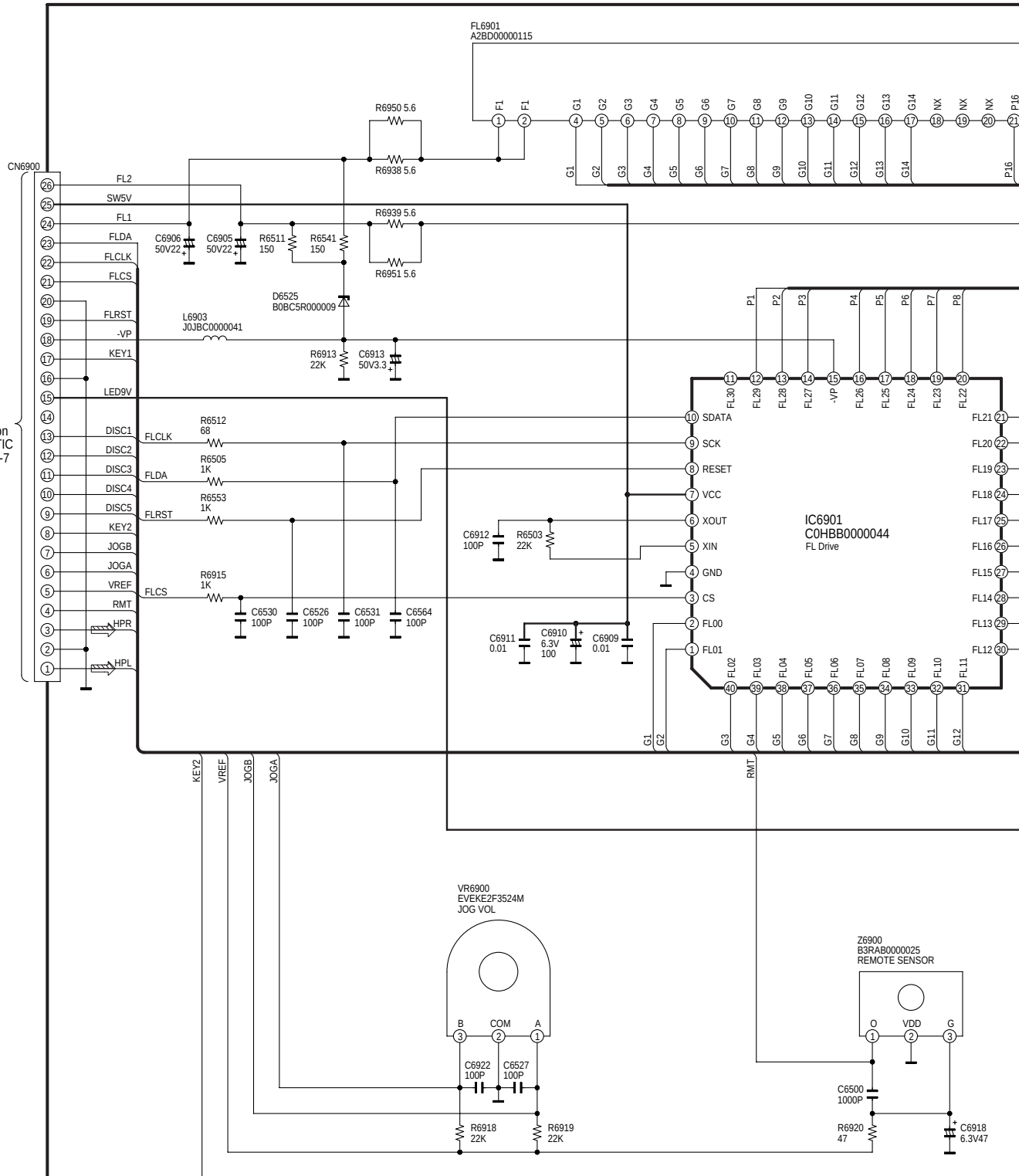


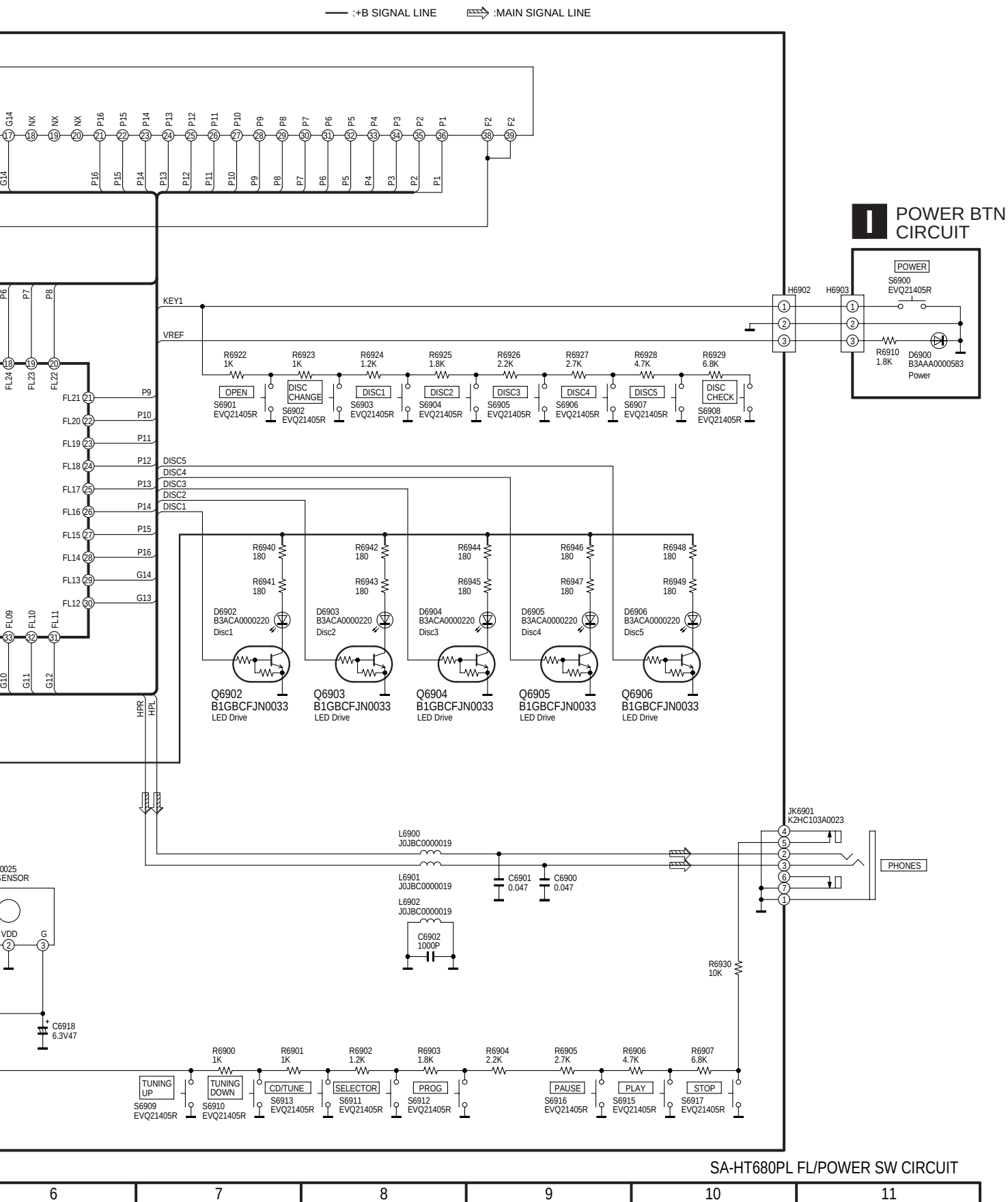


SCHEMATIC DIAGRAM-9

H FL CIRCUIT

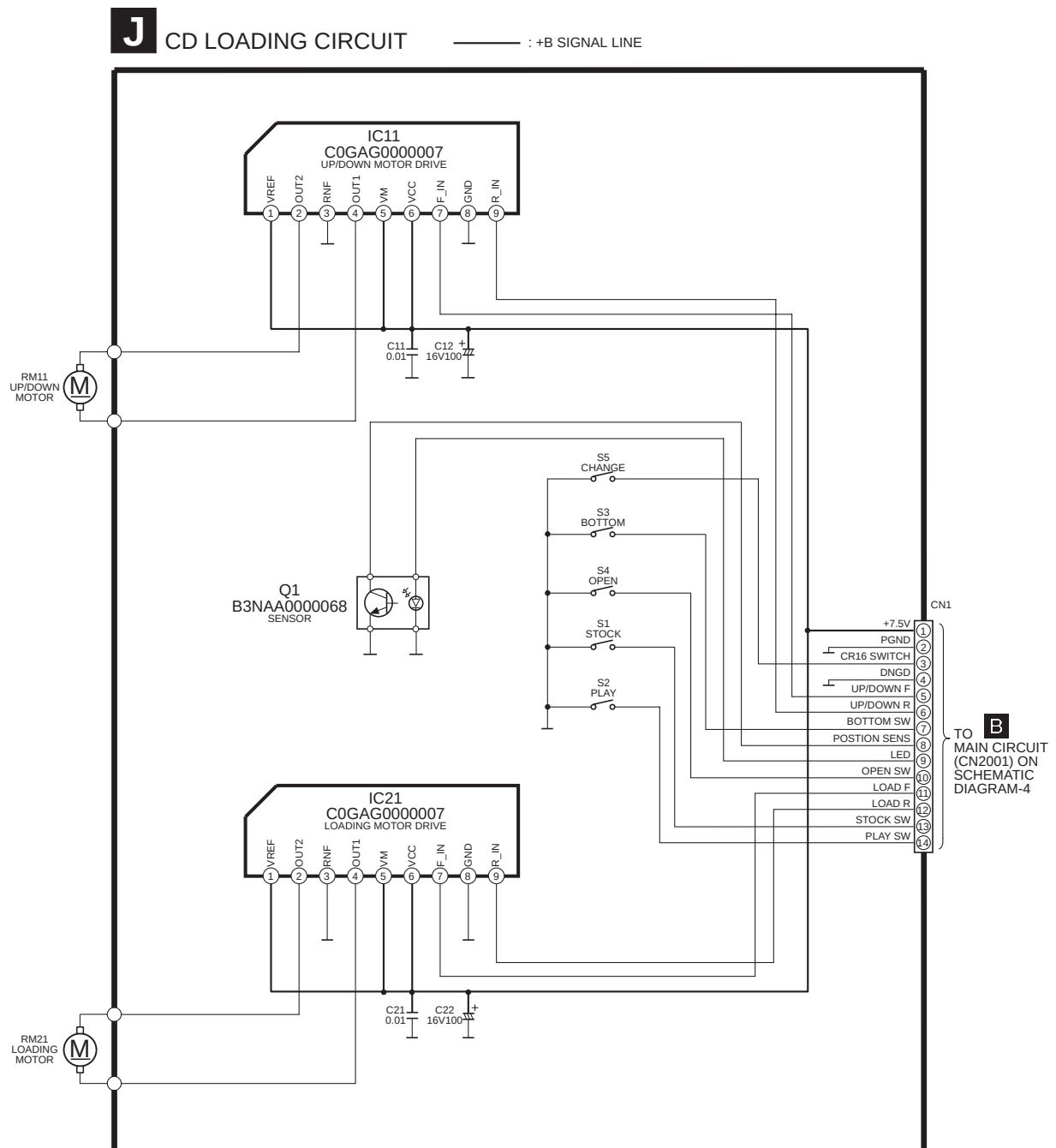
TO MAIN
CIRCUIT
(CN2009)on
SCHEMATIC
DIAGRAM-7







SCHEMATIC DIAGRAM-10

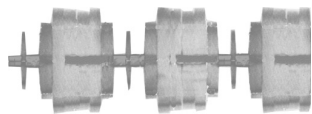




SA-HT680PL CD LOADING CIRCUIT



WF No. IC2006-2 (PLAY)



0.6Vp-p(20usec/div)

WF No. IC2006-4 (PLAY)



1.1Vp-p(20usec/div)

WF No. IC2006-6 (PLAY)



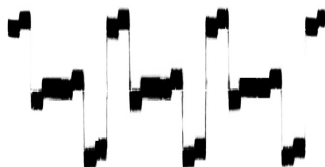
1.1Vp-p(20usec/div)

WF No. IC2006-8 (PLAY)



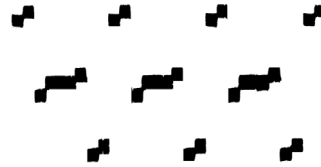
0.5Vp-p(20usec/div)

WF No. IC2006-9 (PLAY)



0.5Vp-p(20usec/div)

WF No. IC2006-11 (PLAY)



1.0Vp-p(20usec/div)

WF No. IC2006-12 (PLAY)



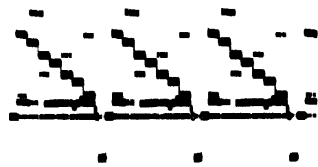
1.0Vp-p(20usec/div)

WF No. IC2006-13 (PLAY)



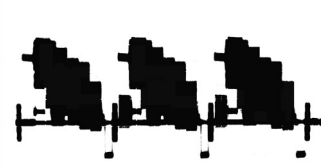
2.1Vp-p(20usec/div)

WF No. IC2006-14 (PLAY)



2.1Vp-p(20usec/div)

WF No. IC2006-15 (PLAY)



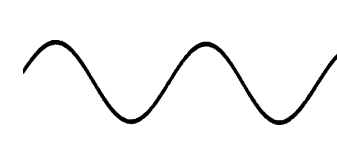
2.1Vp-p(20usec/div)

WF No. IC2006-16 (PLAY)



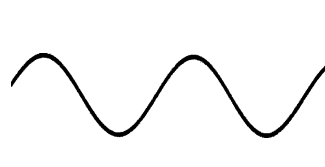
1.2Vp-p(20usec/div)

WF No. IC2011-36 (PLAY)



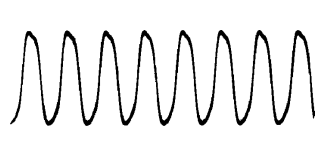
0.4Vp-p(200usec/div)

WF No. IC2013-7 (PLAY)



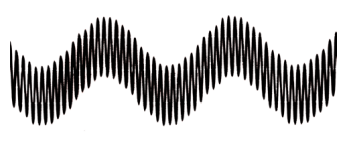
19.Vp-p(200usec/div)

WF No. IC2018-13 (PLAY)



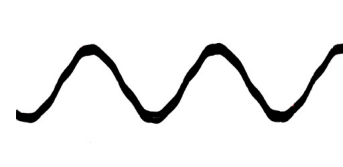
2.1Vp-p(100nsec/div)

WF No. IC501-1 (PLAY)

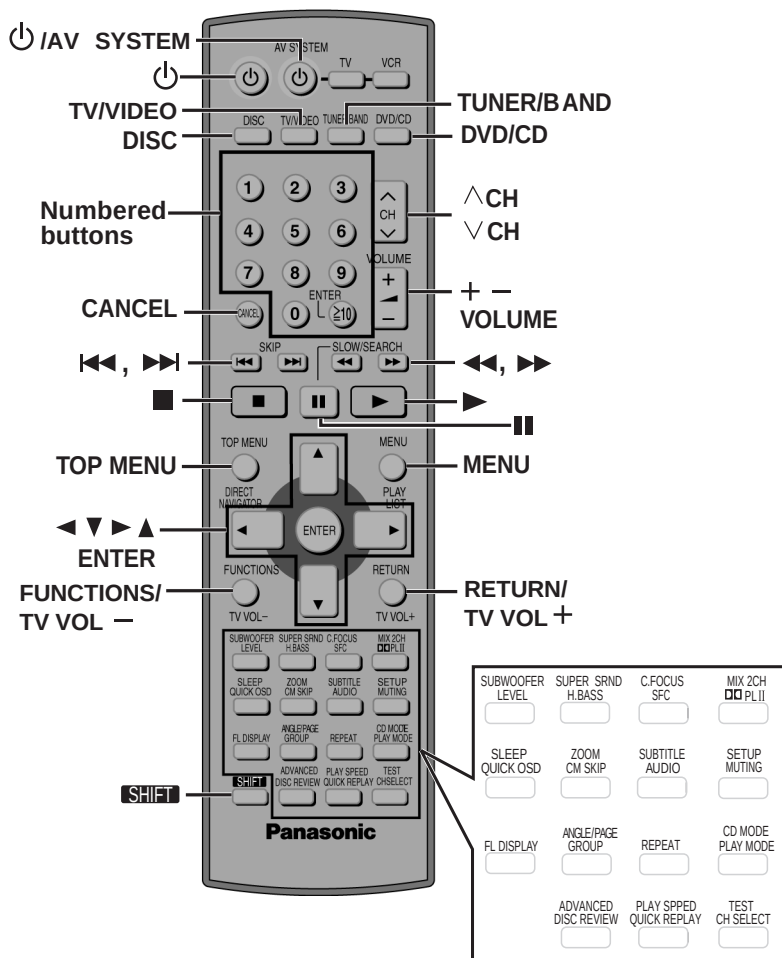
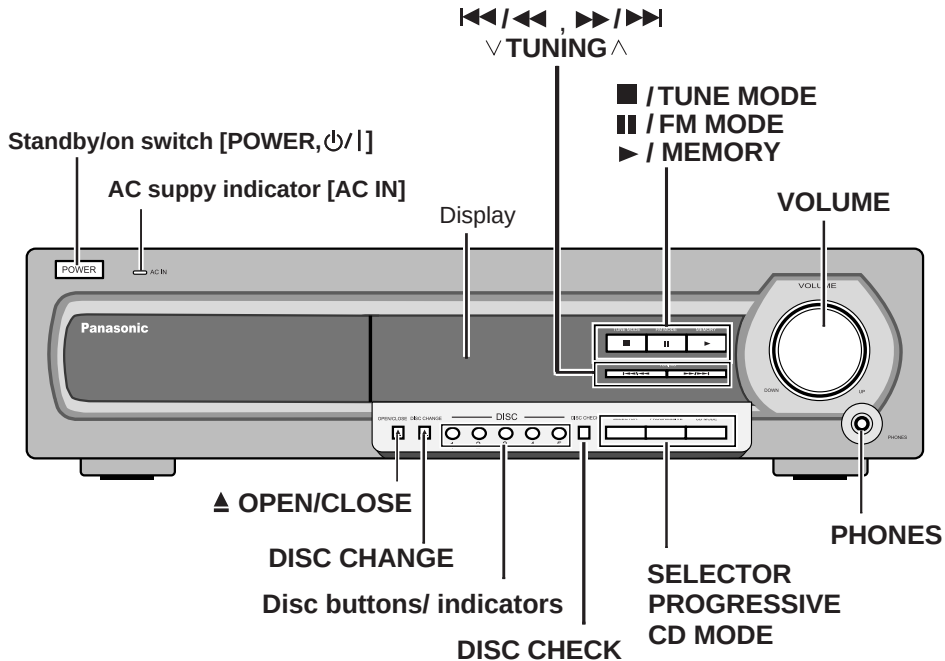


160mVp-p(5msec/div)

WF No. IC501-8 (PLAY)



120mVp-p(5msec/div)



■ Discs that can be played

Disc	Logo	Indication in these operating instructions	Remarks
DVD-RAM		RAM	Recorded with devices using Version 1.1 of the Video Recording Format (a unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc.
		JPEG	Recorded using the DCF (Design rule for Camera File system) standard Version 1.0. ● To play JPEG files, select "Play as Data Disc" in Other Menu.
DVD-Audio		DVD-A	—
		DVD-V	Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as DVD-Video" in Other Menu.
DVD-Video		DVD-V	—
DVD-R			Panasonic DVD-R recorded and finalized* on Panasonic DVD-Video recorders or DVD-Video cameras are played as DVD-Video on this unit.
Video CD		VCD	—
SVCD			Conforming to IEC62107
CD		CD	This unit is compatible with HDCD, but does not support the Peak Extend function (a function which expands the dynamic range of high level signals). HDCD-encoded CD's sound better because they are encoded with 20 bits, as compared with 16 bits for all other CD's. ● During HDCD play, "HDCD" lights on the unit's display.
CD-R CD-RW	—	WMA MP3 JPEG CD VCD	● This unit can play CD-R/RW (audio recording disc) recorded with the formats on the left. Close the sessions or finalize* the disc after recording. ● HighMAT discs WMA, MP3 or JPEG files only. To play without using the HighMAT function, select "Play as Data Disc" in Other Menu. ● WMA This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).

* A process that allows play on compatible equipment.

● It may not be possible to play the above discs in all cases due to the type of disc or condition of the recording.

■ Discs that cannot be played

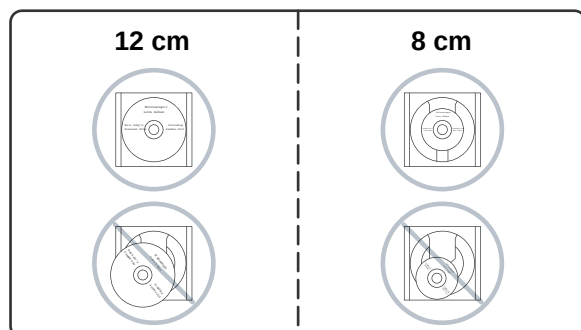
DVD-ROM, CD-ROM, CDV, CD-G, DVD+R, +RW, DVD-RW, SACD, DivX Video Discs and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

■ Audio format of DVD's

This unit automatically recognizes and decodes discs with these symbols.



■ Inserting a disc correctly



- Insert the disc correctly into position as indicated in the diagrams above.
- Place only one disc on a tray.
- Insert the disc with the label side facing up.

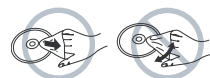
■ To clean disc

DVD-Audio, DVD-Video, Video CD, SVCD and CD

Wipe with a damp cloth and then wipe dry.

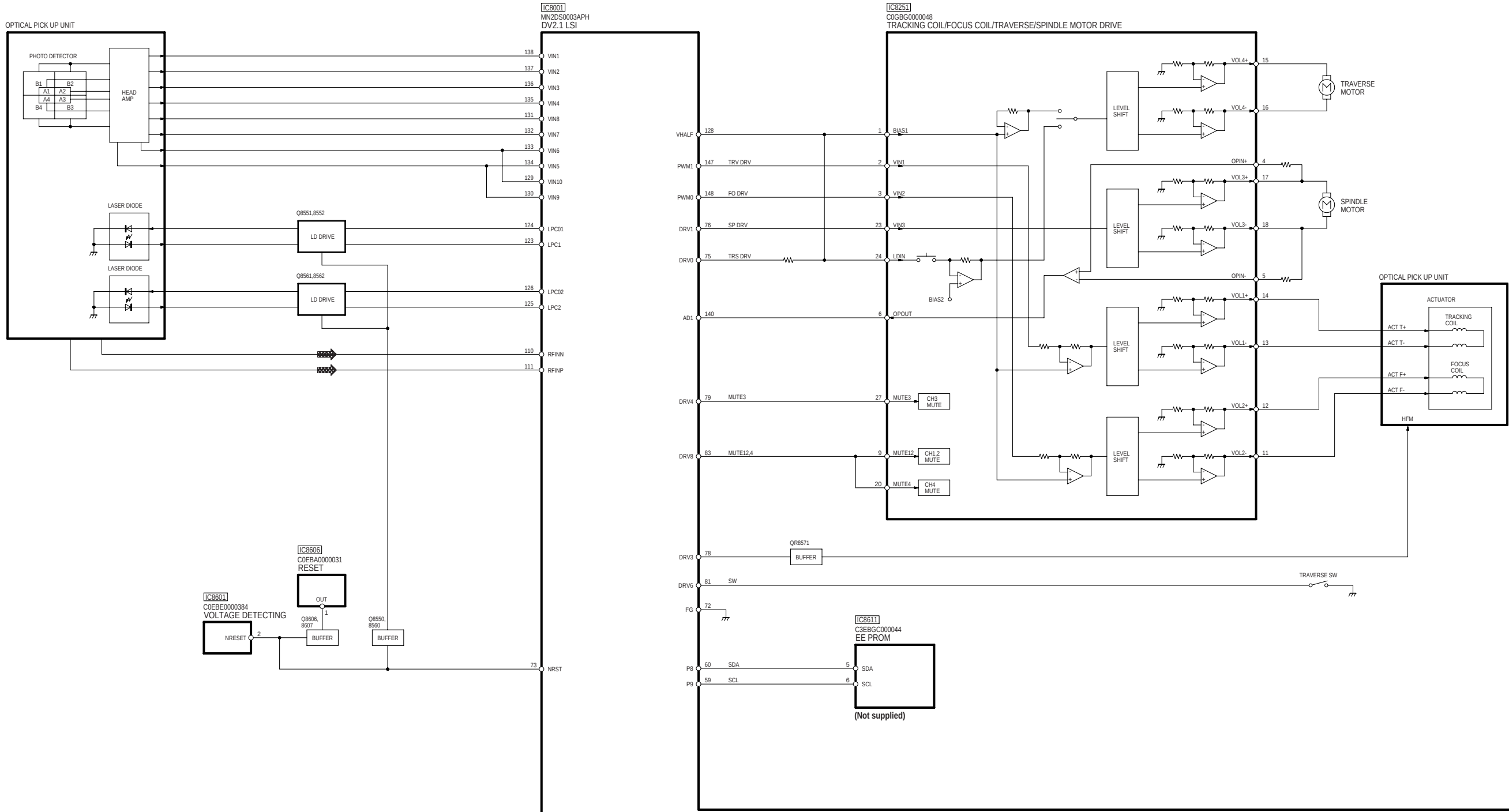
DVD-RAM and DVD-R

- Clean with an optional DVD-RAM/PD disc cleaner (LF-K200DCA1, where available).
- Never use cloths or cleaners for CD's, etc.

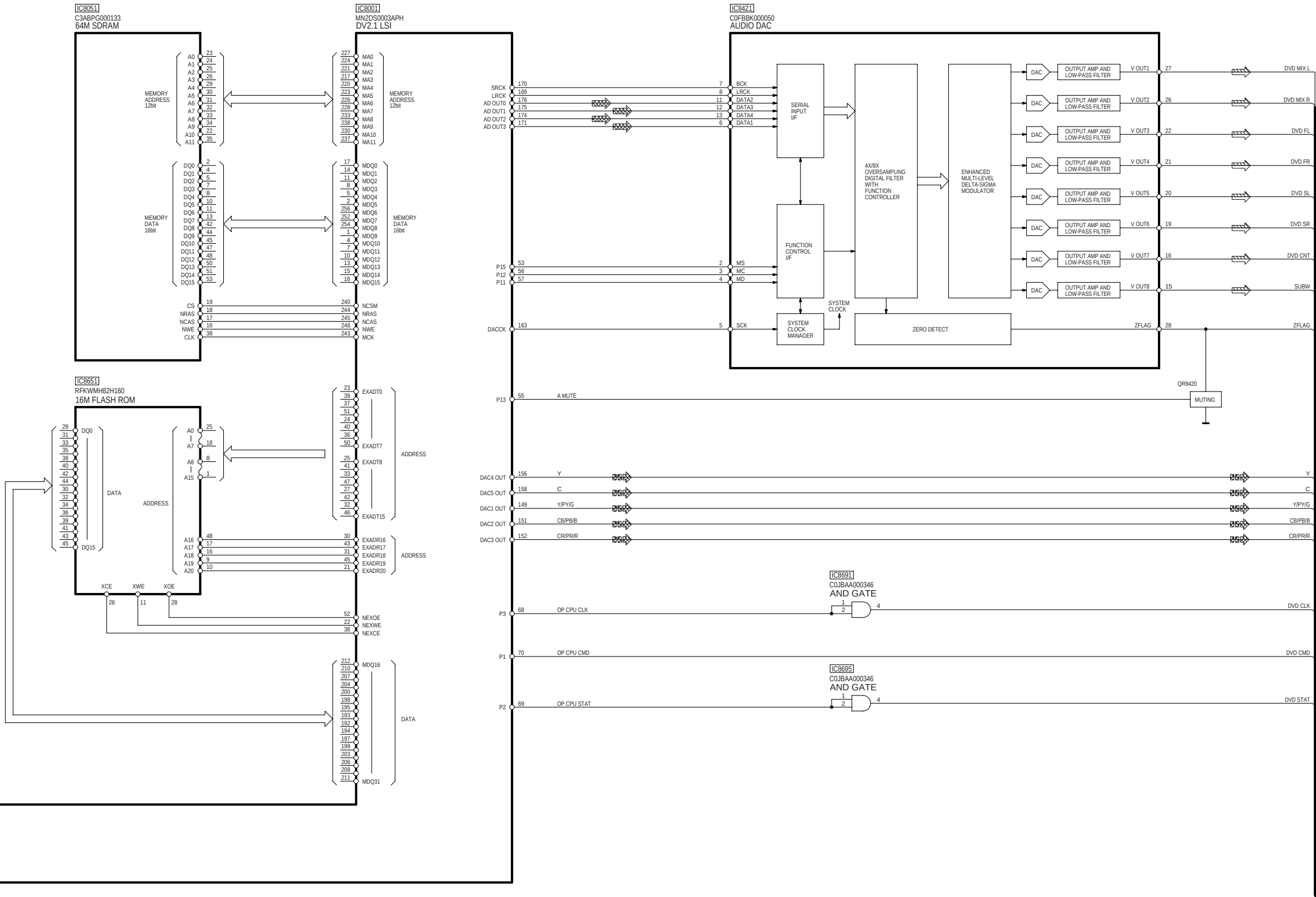


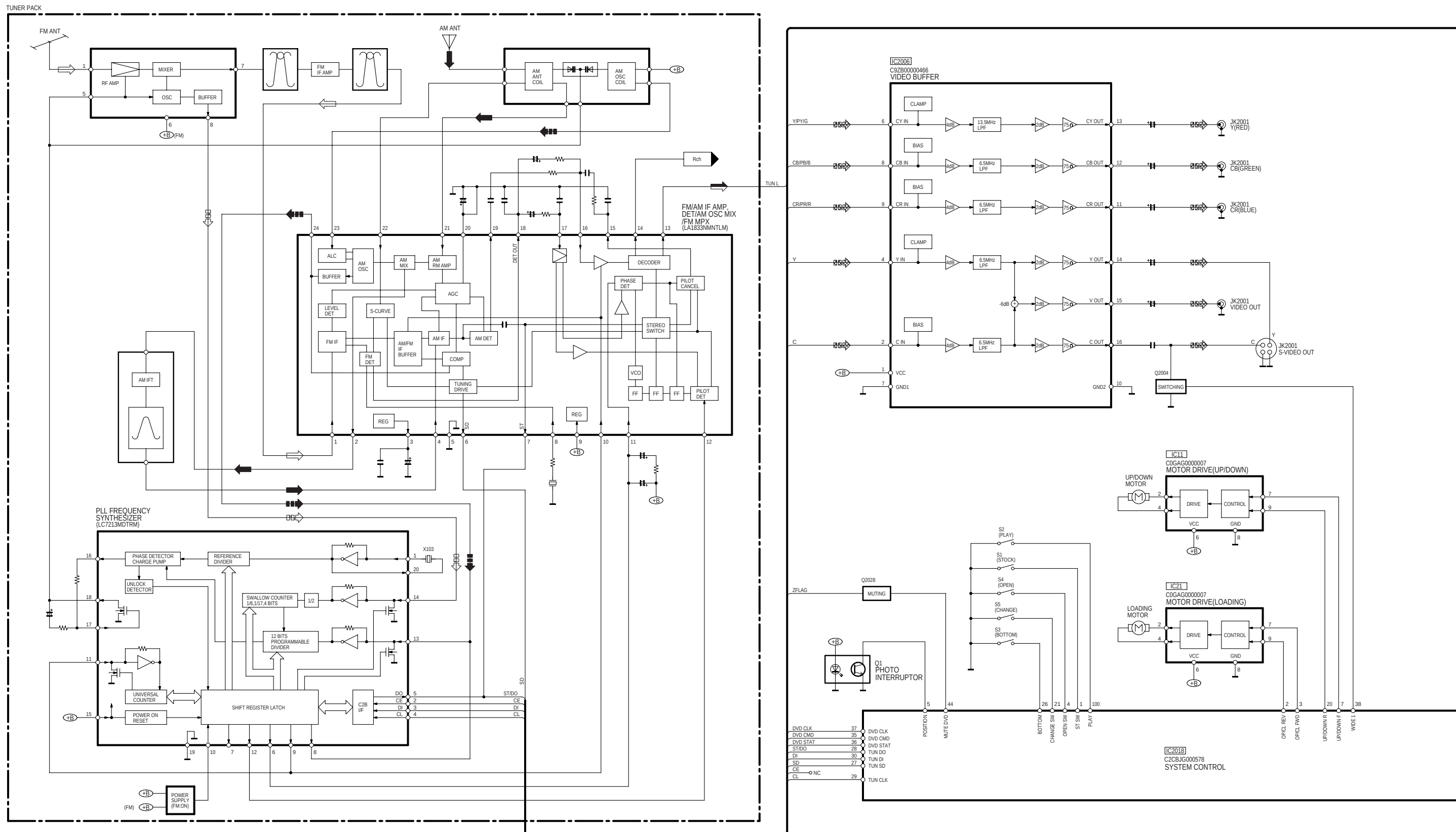
■ Disc handling precautions

- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
 - Discs with exposed adhesive from removed stickers or labels (rented discs, etc).
 - Discs that are badly warped or cracked.
 - Irregularly shaped discs, such as heart shapes.

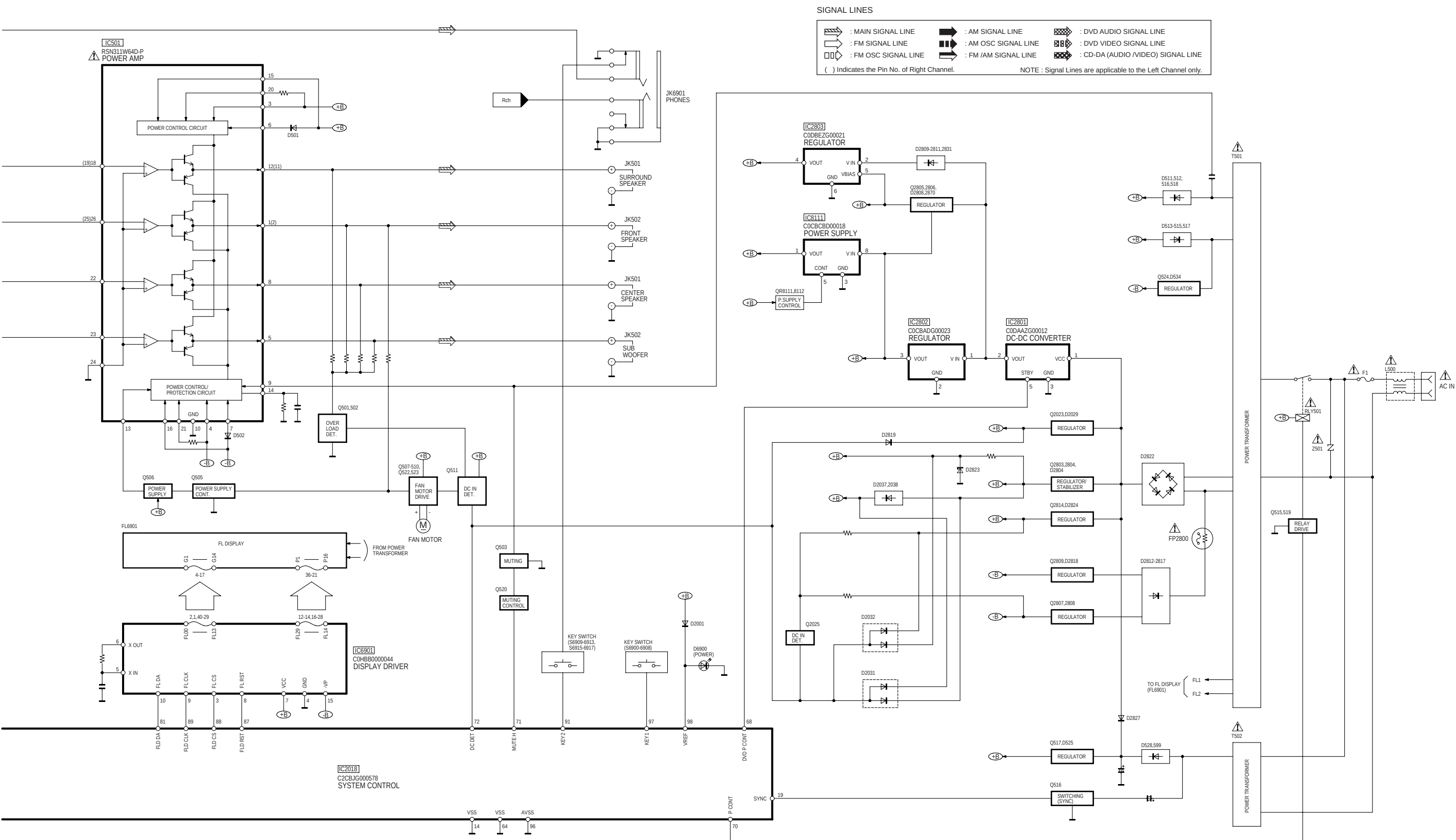


SA-HT680PL BLOCK DIAGRAM









SA-HT680PL BLOCK DIAGRAM

CD Loading P.C.B.

Ref No. MODE	IC11										IC21									
	1	2	3	4	5	6	7	8	9		1	2	3	4	5	6	7	8	9	
CD PLAY	7.8	0	0	0	7.8	7.8	5.1	0	5.1		7.8	0	0	0	7.8	7.8	5.1	0	5.1	
STANDBY	8.5	1.6	0	1.5	8.5	8.4	0	0	0		8.4	1.8	0	1.5	8.4	8.4	0	0	0	

AC INLET P.C.B.

Ref No. MODE	Q515				Q516				Q517				Q519							
	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	0	0		0	0.5	-0.1		0	2.5	1.1		0	0.1	0					
STANDBY	0	1.1	0		0	0.5	-0.1		1.1	2.3	1.2		0	0	0					

REGULATOR P.C.B.

[illegible]

Ref No. MODE	IC6901																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-4.9	-4.9	0.3	0	0.4	0.4	0.9	0.9	0.7	0.1	-5.3	-2.5	-4.6	-4.9	-5.3	-4.9	-2.5	-4.5	-3.0	-3.6
STANDBY	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No. MODE	IC6901																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-3.3	-4.5	-4.0	-5.3	-4.9	-4.1	-4.5	-5.3	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	Q6902				Q6903				Q6904				Q6905				Q6906			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.4	0		0	5.3	0		0	5.2	0		0	5.2	0		0	0	0.9	
STANDBY	0	4.1	0		0	4.1	0		0	4.1	0		0	4.1	0		0	4.1	0	

Ref No.	IC2006																													
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16														
CD PLAY	4.8	2.3	2.4	1.7	4.8	1.7	0	2.3	2.3	0	2.2	2.2	1.7	1.7	1.7	2.2														
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
Ref No.	IC2011																													
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20										
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
STANDBY	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Ref No.	IC2011																													
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40										
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	-6.3	3.8	0	0	0	0	0	0										
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0										
Ref No.	IC2011																													
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60										
CD PLAY	0	-6.9	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
STANDBY	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0										
Ref No.	IC2011																													
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80										
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
STANDBY	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Ref No.	IC2012																													
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20										
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.0	-6.9	0	0	0										
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Ref No.	IC2013										IC2015																			
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8													
CD PLAY	0	0	0	-6.9	0	0	0	7.0		0	0	0	-6.9	0	0	0	7.0													
STANDBY	0.1	0.1	0	0.1	0	0.1	0.1	0.1		0	0	0	0.1	0	0	0	0.1													
Ref No.	IC2018																													
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20										
CD PLAY	0	5.1	5.1	5.2	0.2	0	5.1	0	0	0	0	5.1	2.5	0	-	5.1	5.1	5.1	3.0	5.1										
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0.9	0.4	0	0.5	0.9	0.9	0.9	0.5	0										
Ref No.	IC2018																													
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40										
CD PLAY	5.2	0	0	0	0	5.2	5.2	5.2	5.2	5.2	0	0	0	5.0	3.9	4.0	4.3	5.1	0	5.0										
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Ref No.	IC2018																													
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60										
CD PLAY	0	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.1	0	0	0										
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
Ref No.	IC2018																													
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80										
CD PLAY	0	5.1	0	0	0	0	0	5.1	2.5	2.5	5.0	5.1	-	0	0	5.2	0	0	0	0										
STANDBY	0	0.9	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0										
Ref No.	IC2018																													
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100										
CD PLAY	0.5	5.1	0	0	0	0	5.1	2.0	3.8	0.8	5.2	0.8	0.4	0	0	0	5.2	5.2	5.1	0										
STANDBY	0	0	0	0	0	0	0	0	0	0	0.9	0	0.1	0	0	0	0.9	0.9	0.9	0										
Ref No.	IC2019										IC2801										IC2802									
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5		1	2	3												
CD PLAY	-	5.2	0	0	0	0	0	-		16.0	6.1	-0.1	0.9	3.6		6.0	-	5.0												
STANDBY	-	0.9	0	0	0	0	0	-		0.1	0	0	0	0		0	0	0												
Ref No.	IC2803																													
MODE	1	2	3	4	5	6																								
CD PLAY	0.8	2.8	-	1.4	4.0	0																								
STANDBY	0	0	-	0	0	0																								
Ref No.	Q2000				Q2004				Q2023				Q2025				Q2028													
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B											
CD PLAY	0	5.1	0		0	0	5.0		9.5	16.1	10.1		0	4.9	-2.9		0	0	4.0											
STANDBY	0	0.9	0		0	0	0		0.1	0.1	0.1		0	0.2	0.1		0	0	0											
Ref No.	Q2102						Q2103						Q2104																	
MODE	1	2	3	4	5	6			E	C	B		1	2	3	4	5	6												
CD PLAY	0	-4.6	0	0	-4.7	0			1.9	1.9	0		0	0.7	0	0	0.7	0												
STANDBY	0	0	0	0	0	0			0	0	0		0	0	0	0	0	0												
Ref No.	Q2105				Q2200						Q2201						Q2500													
MODE	E	C	B		1	2	3	4	5	6			E	C	B		E	C	B											
CD PLAY	0	-4.4	0		0	-4.4	0	0	-4.4	0			0	-4.6	0		2.3	2.3	0											
STANDBY	0	0	0		0	0	0	0	0	0			0	0	0		0	0	0											
Ref No.	Q2600				Q2601						Q2805						Q2806													
MODE	E	C	B		1	2	3	4	5	6			E	C	B		E	C	B											
CD PLAY	2.3	2.3	0		0	0.7	0	0	0.7	0			6.0	5.0	5.3		4.3	5.3	4.9											
STANDBY	0	0	0		0	0	0	0	0	0			0	0	0.2		0	0.2	0											
Ref No.	Q6501				Q6502																									
MODE	E	C	B		E	C	B																							
CD PLAY	1.0	6.5	1.6		0.9	6.6	1.5																							
STANDBY	0	0.1	0		0	0.1	0																							

RefNo.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.1	3.0	0	3.1	3.3	3.4	3.0	3.1	0	0	3.1	3.4	2.9	3.1	3.0	0	3.0	3.0	3.4	0
RefNo.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.4	-	-	1.5	0.8	1.2	1.0	3.4	0	0.5	1.0	-	-	3.4	0	-	-	2.4	-	-
RefNo.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	-	-	-	1.2	-	-	-	3.4	0	-	-	2.5	0	0	0	-	-	-	-	-
RefNo.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	-	3.4	0	0	0.1	1.0	1.0	3.0	2.8	3.1	0.1	0.1	3.2	0	1.7	.0	1.7	0.1	3.4	0
RefNo.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	3.4	0.1	3.4	3.4	0.1	0.1	0	0.1	1.2	0	0	0	0	0.1	0.1	0	0	3.4	0.8	0.1
RefNo.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	2.4	2.1	1.9	0.3	0	1.9	3.4	2.1	2.1	1.9	1.8	1.1	1.1	1.7	1.7	1.7	1.7	3.3	2.0	1.7
RefNo.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.5	0	0	0.1	0	0	2.3	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.4	2.4	0	2.4	0	0
RefNo.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	0.5	0	0	0	0	1.1	2.2	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.4	2.4	0	2.4	3.4	0
RefNo.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	3.4	0	0	0	0	3.4	3.4	1.7	0	1.7	0.9	1.2	0	0	0	0.9	1.7	3.4	0	3.4
RefNo.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	0	3.4	0	0	-	-	-	-	-	3.4	0	1.0	1.7	0	1.5	3.4	1.3	0.5	1.5	1.4
RefNo.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
CD PLAY	0	3.4	3.4	1.2	0	1.7	1.4	1.4	3.4	3.4	1.0	1.8	0	-	-	3.4	2	0	1.2	1.6
RefNo.	IC8001																			
MODE	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
CD PLAY	0.2	0	1.7	0.2	3.4	1.7	0.1	0.9	0	0.1	3.4	1.6	-	2.2	0	1.2	0.1	0.1	3.4	3.2
RefNo.	IC80																			

A DVD MODULE P.C.B. (REP3867A) (SIDE:A)

A DVD MODULE P.C.B. (REP3867A) (SIDE:B)

SA-HT680PI DVD MODULE P.C.B.

The diagram illustrates the layout of the DVD Module P.C.B. (REP3867A) for Side A and Side B. It features a coordinate grid with columns labeled A through N and rows labeled 1 through 9. Side A components include IC8651, IC8606, IC8691, IC8695, IC8607, IC8601, IC8603, IC8602, IC8604, IC8605, IC8608, IC8609, IC8610, IC8611, IC8612, IC8613, IC8614, IC8615, IC8616, IC8617, IC8618, IC8619, IC8620, IC8621, IC8622, IC8623, IC8624, IC8625, IC8626, IC8627, IC8628, IC8629, IC8630, IC8631, IC8632, IC8633, IC8634, IC8635, IC8636, IC8637, IC8638, IC8639, IC8640, IC8641, IC8642, IC8643, IC8644, IC8645, IC8646, IC8647, IC8648, IC8649, IC8650, IC8651, IC8652, IC8653, IC8654, IC8655, IC8656, IC8657, IC8658, IC8659, IC8660, IC8661, IC8662, IC8663, IC8664, IC8665, IC8666, IC8667, IC8668, IC8669, IC8670, IC8671, IC8672, IC8673, IC8674, IC8675, IC8676, IC8677, IC8678, IC8679, IC8680, IC8681, IC8682, IC8683, IC8684, IC8685, IC8686, IC8687, IC8688, IC8689, IC8690, IC8691, IC8692, IC8693, IC8694, IC8695, IC8696, IC8697, IC8698, IC8699, IC8700. Side B components include IC8251, IC8252, IC8253, IC8254, IC8255, IC8256, IC8257, IC8258, IC8259, IC8260, IC8261, IC8262, IC8263, IC8264, IC8265, IC8266, IC8267, IC8268, IC8269, IC8270, IC8271, IC8272, IC8273, IC8274, IC8275, IC8276, IC8277, IC8278, IC8279, IC8280, IC8281, IC8282, IC8283, IC8284, IC8285, IC8286, IC8287, IC8288, IC8289, IC8290, IC8291, IC8292, IC8293, IC8294, IC8295, IC8296, IC8297, IC8298, IC8299, IC8300, IC8301, IC8302, IC8303, IC8304, IC8305, IC8306, IC8307, IC8308, IC8309, IC8310, IC8311, IC8312, IC8313, IC8314, IC8315, IC8316, IC8317, IC8318, IC8319, IC8320, IC8321, IC8322, IC8323, IC8324, IC8325, IC8326, IC8327, IC8328, IC8329, IC8330, IC8331, IC8332, IC8333, IC8334, IC8335, IC8336, IC8337, IC8338, IC8339, IC8340, IC8341, IC8342, IC8343, IC8344, IC8345, IC8346, IC8347, IC8348, IC8349, IC8350, IC8351, IC8352, IC8353, IC8354, IC8355, IC8356, IC8357, IC8358, IC8359, IC8360, IC8361, IC8362, IC8363, IC8364, IC8365, IC8366, IC8367, IC8368, IC8369, IC8370, IC8371, IC8372, IC8373, IC8374, IC8375, IC8376, IC8377, IC8378, IC8379, IC8380, IC8381, IC8382, IC8383, IC8384, IC8385, IC8386, IC8387, IC8388, IC8389, IC8390, IC8391, IC8392, IC8393, IC8394, IC8395, IC8396, IC8397, IC8398, IC8399, IC8400, IC8401, IC8402, IC8403, IC8404, IC8405, IC8406, IC8407, IC8408, IC8409, IC8410, IC8411, IC8412, IC8413, IC8414, IC8415, IC8416, IC8417, IC8418, IC8419, IC8420, IC8421, IC8422, IC8423, IC8424, IC8425, IC8426, IC8427, IC8428, IC8429, IC8430, IC8431, IC8432, IC8433, IC8434, IC8435, IC8436, IC8437, IC8438, IC8439, IC8440, IC8441, IC8442, IC8443, IC8444, IC8445, IC8446, IC8447, IC8448, IC8449, IC8450, IC8451, IC8452, IC8453, IC8454, IC8455, IC8456, IC8457, IC8458, IC8459, IC8460, IC8461, IC8462, IC8463, IC8464, IC8465, IC8466, IC8467, IC8468, IC8469, IC8470, IC8471, IC8472, IC8473, IC8474, IC8475, IC8476, IC8477, IC8478, IC8479, IC8480, IC8481, IC8482, IC8483, IC8484, IC8485, IC8486, IC8487, IC8488, IC8489, IC8490, IC8491, IC8492, IC8493, IC8494, IC8495, IC8496, IC8497, IC8498, IC8499, IC8500. The diagram also shows various passive components like resistors (R), capacitors (C), and transistors (Q). A 'PbF' label is present at the bottom of each side.

1 2 3 4 5 6 7 8 9

A DVD MODULE P.C.B. (REP3867A) (SIDE:A)

1 5 10 15 20 25 26

FP8501

Q8552

Q8562

Q8551

Q8553

Q8554

Q8555

Q8556

Q8557

Q8558

Q8559

Q8560

Q8561

Q8562

Q8563

Q8564

Q8565

Q8566

Q8567

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Q8942

Q8943

Q8944

Q8945

Q8946

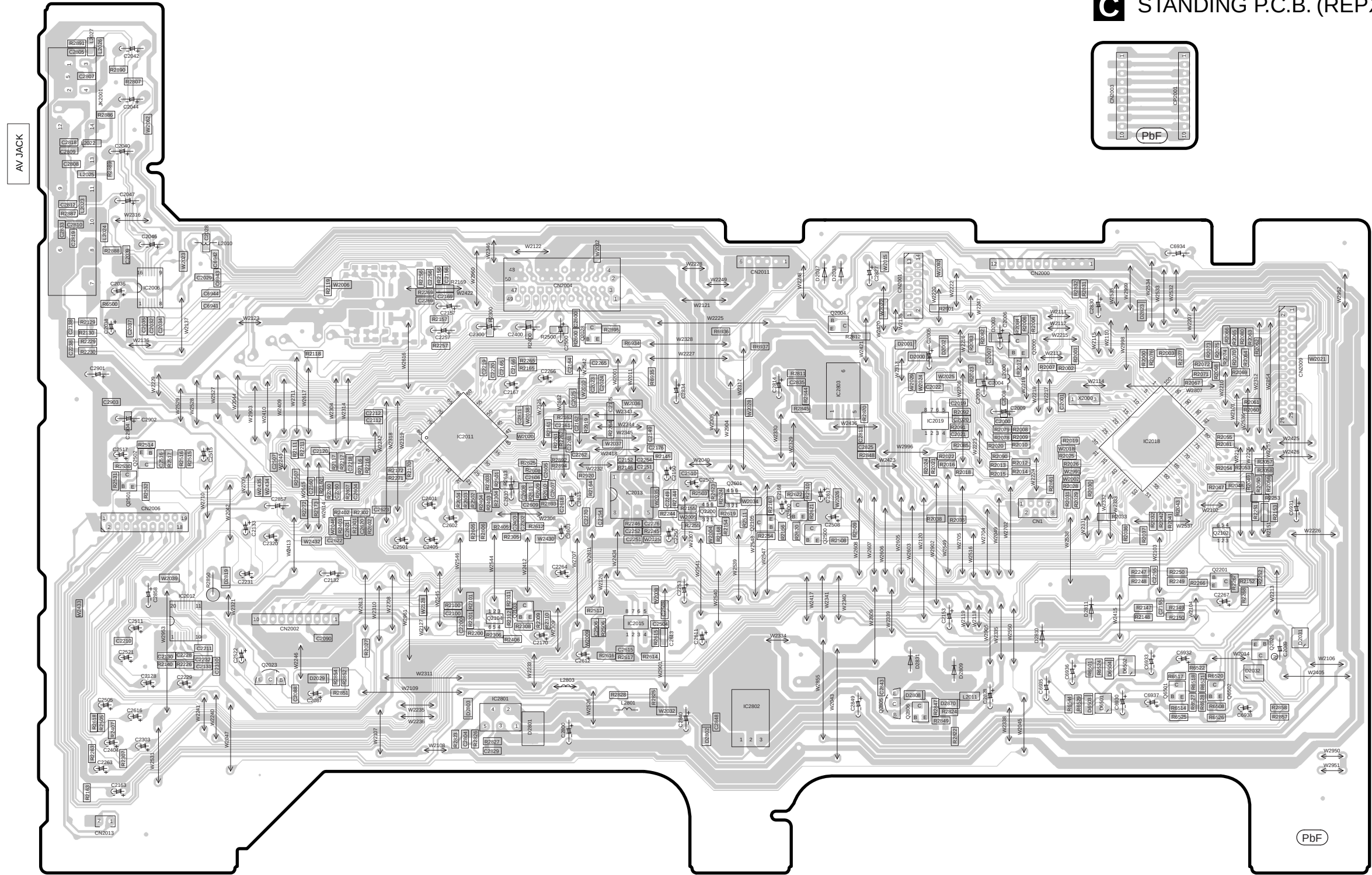
Q8947

Q8948

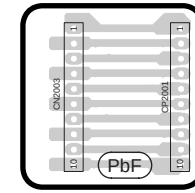
Q89

9

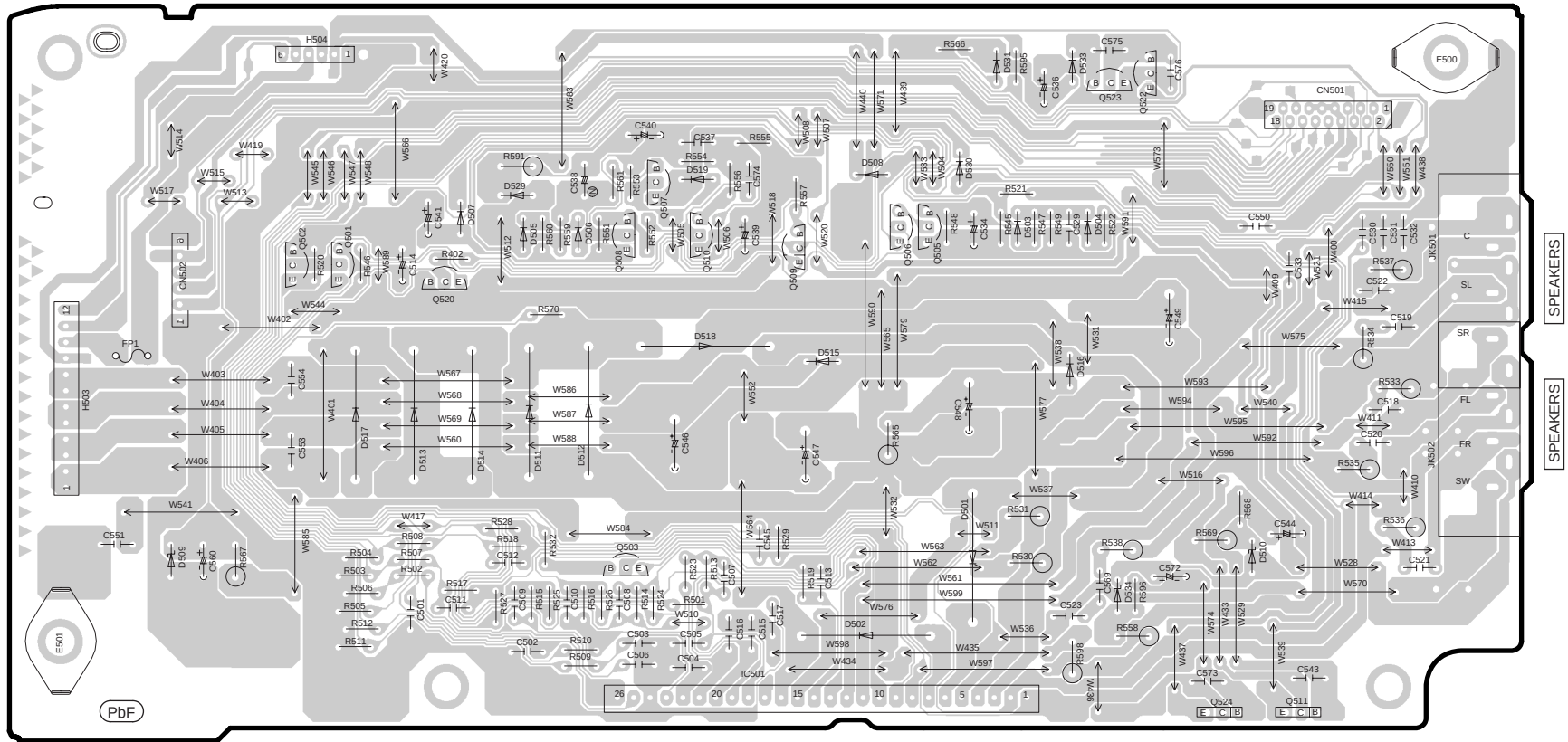
B MAIN P.C.B. (REPX0464B)



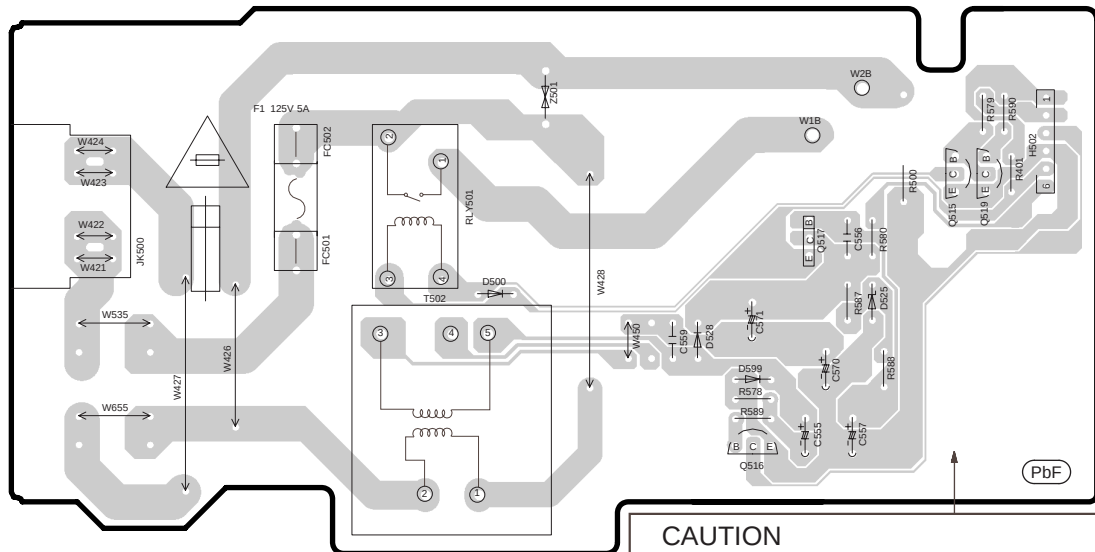
C STANDING P.C.B. (REPX0464B)



E POWER P.C.B. (REPX0459A)

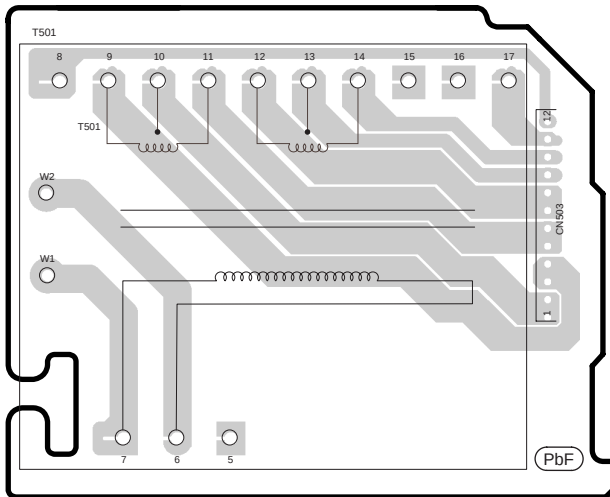


F AC INLET P.C.B. (REPX0459A)



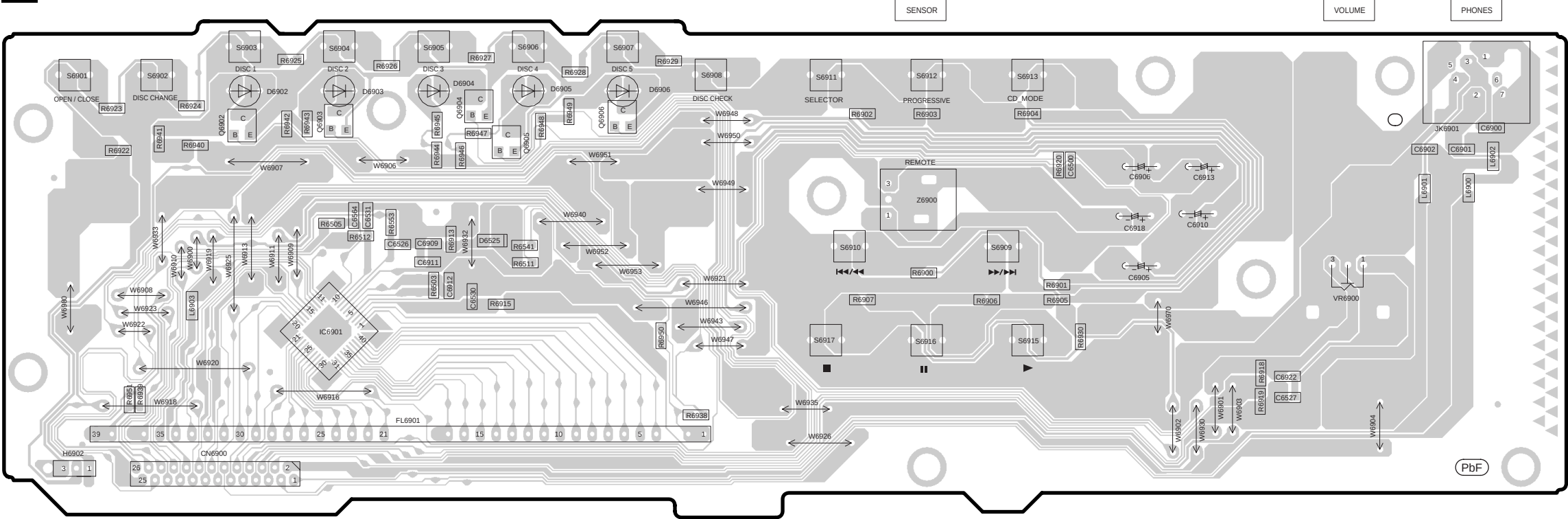
CAUTION
RISK OF ELECTRIC SHOCK AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

G TRANSFORMER P.C.B. (REPX0459A)

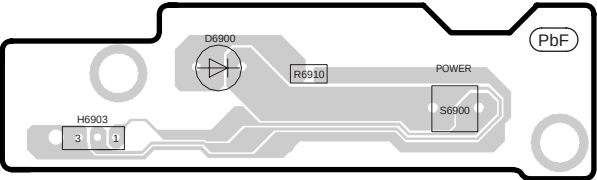


CAUTION
RISK OF ELECTRIC SHOCK AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

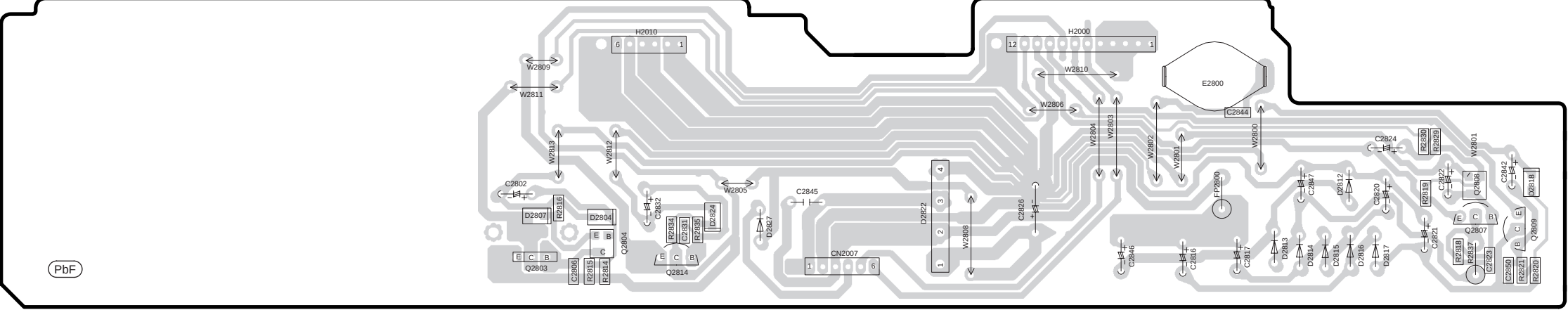
H FL P.C.B. (REPX0462A)

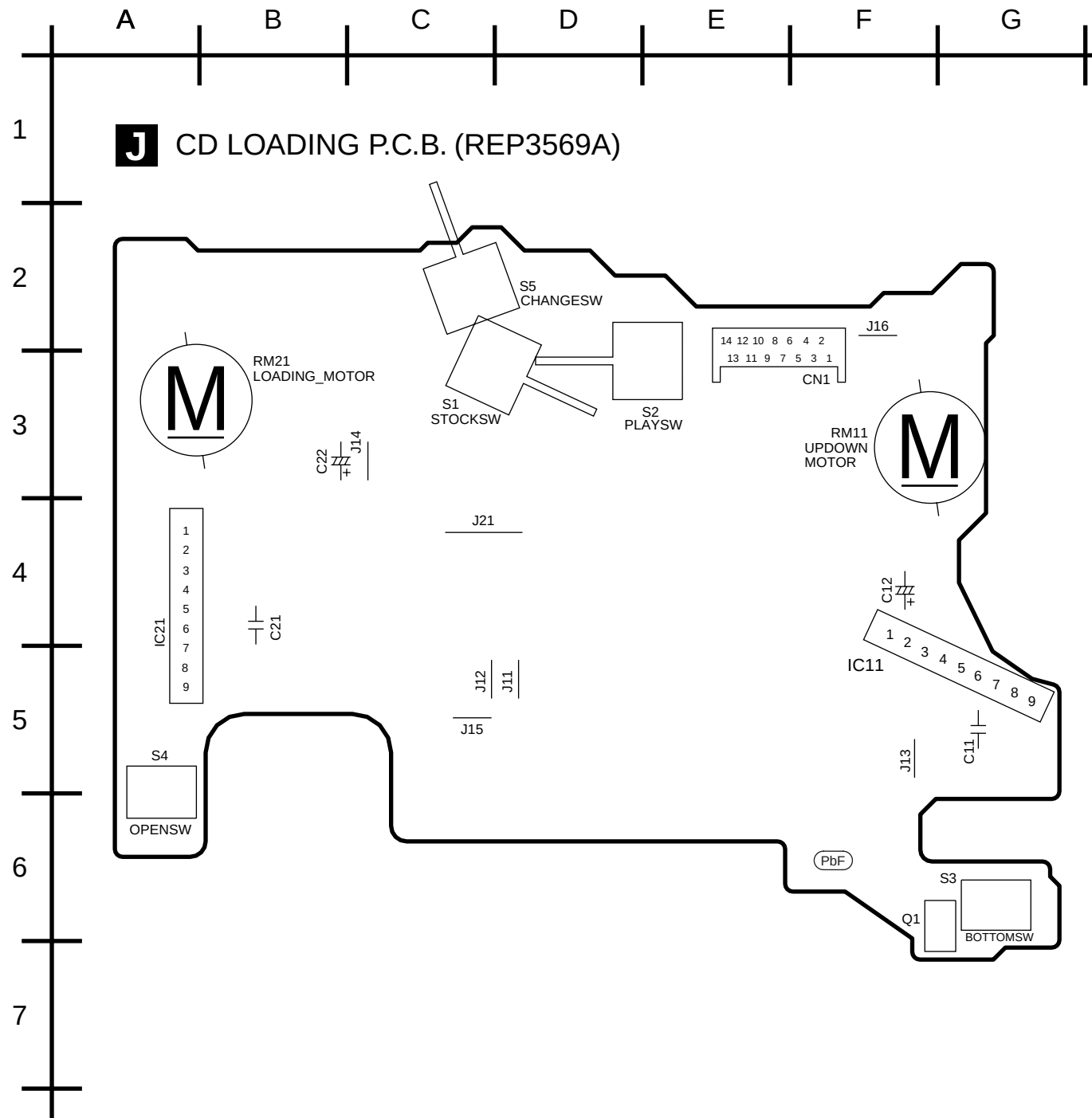


I POWER BTN P.C.B. (REPX0462A)



D REGULATOR P.C.B. (REPX0464B)

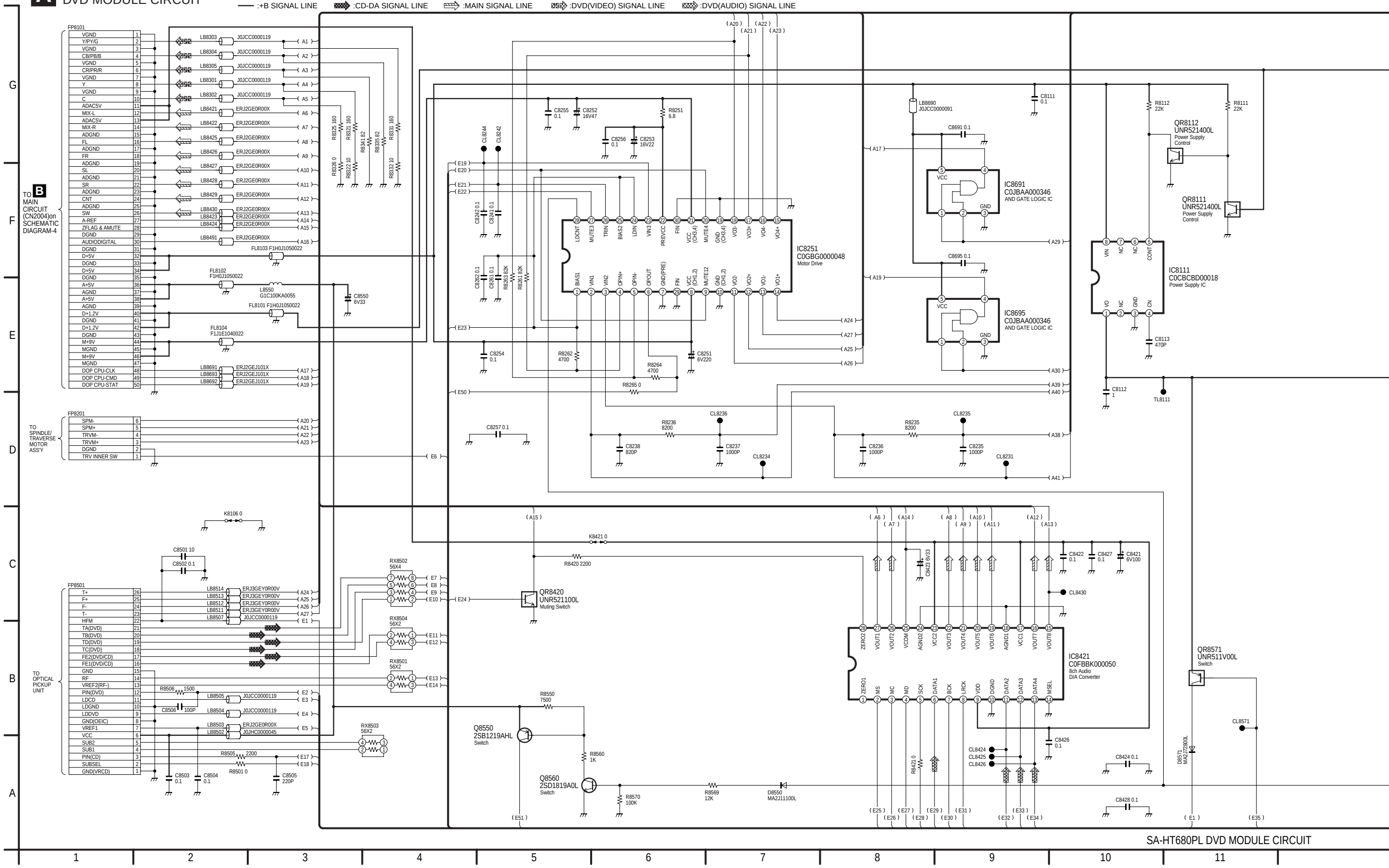




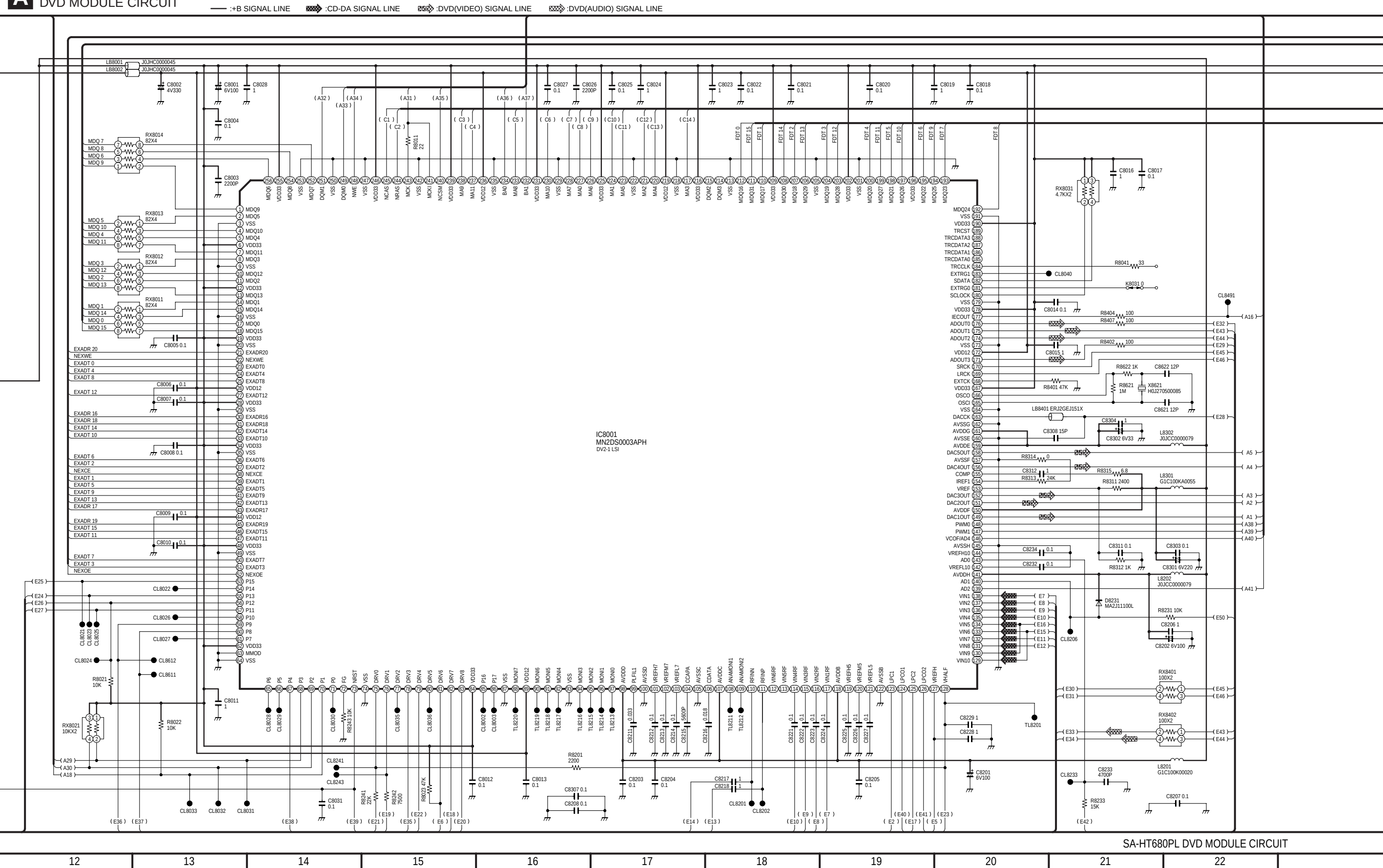
Ref No. MODE	IC501																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	-68.9	-67.8	0	33.6	-33.8	0	0	0	0	0	0	-0.2	33.9	-34.1	0	0	0	68.2
STANDBY	0	0	2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.0
Ref No. MODE	IC501																			
	21	22	23	24	25	26														
CD PLAY	-68.6	0	0	0	0	0														
STANDBY	0	0	0	0	0	0														
Ref No. MODE	Q501				Q502				Q503				Q505				Q506			
	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0.9	0		0	0.9	0		0	0	0.1		0	0	0.9		0.9	0	0.9	
STANDBY	0	0.2	0		0	0.2	0		0	0	-0.6		0	0	0		0	0	0	
Ref No. MODE	Q507				Q508				Q509				Q510				Q511			
	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0.1	0		-1.8	0.8	-1.8		0.1	0.9	0		0	-1.8	0		4.6	33.8	5.0	
STANDBY	0	0.1	0		0	0.1	0		0.1	0.2	0		0	0	0		0.1	0	0	
Ref No. MODE	Q520				Q522				Q523				Q524							
	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0.7	0.7	0		0.8	0.8	0.6		4.6	0	4.2		-10.5	-34.1	-11.1					
STANDBY	0	-0.6	0		0.3	0.1	-0.1		0.1	-0.1	0.4		0	0	0					

SCHEMATIC DIAGRAM-1

A DVD MODULE CIRCUIT



A DVD MODULE CIRCUIT



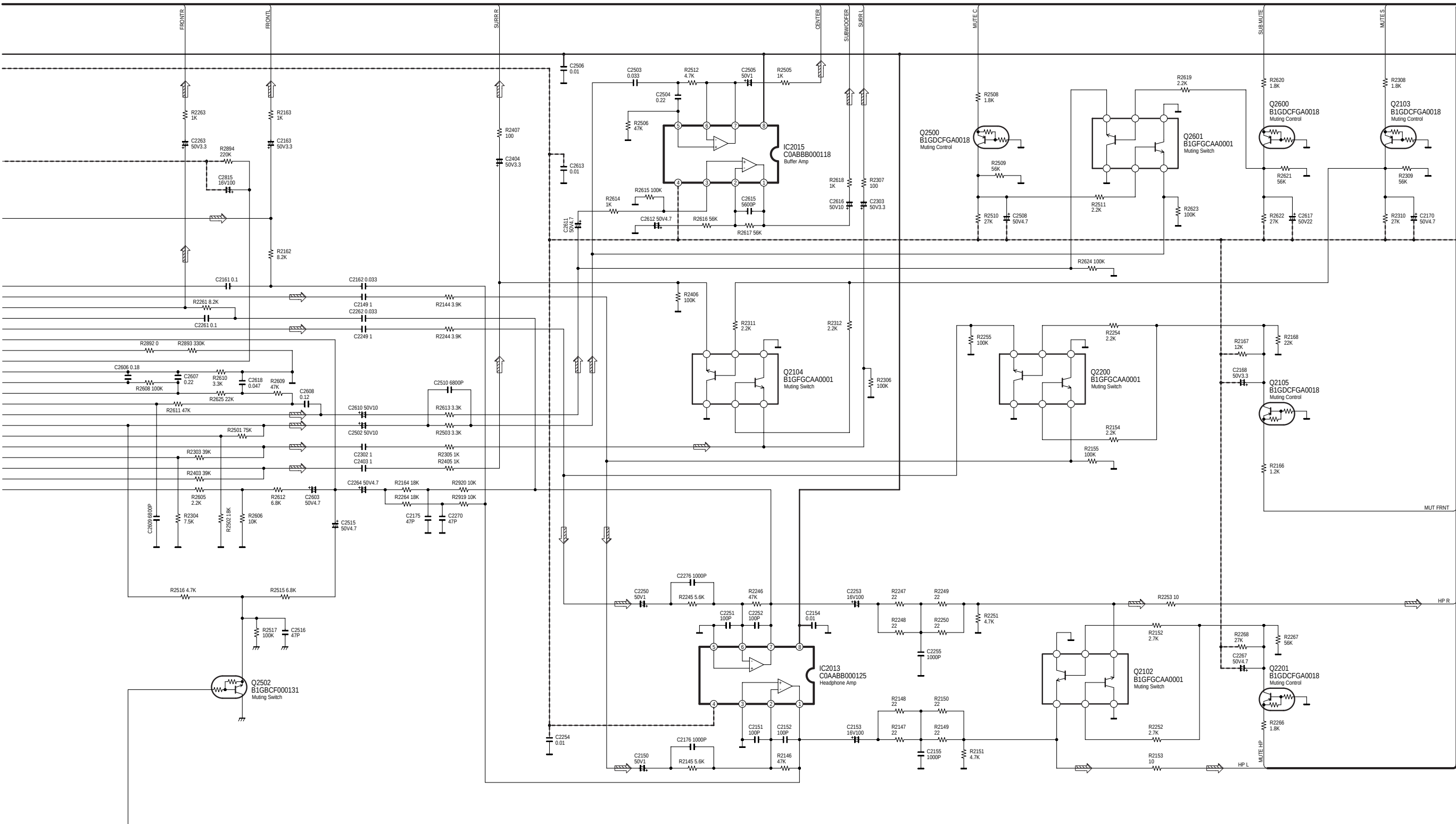
A DVD MODULE CIRCUIT

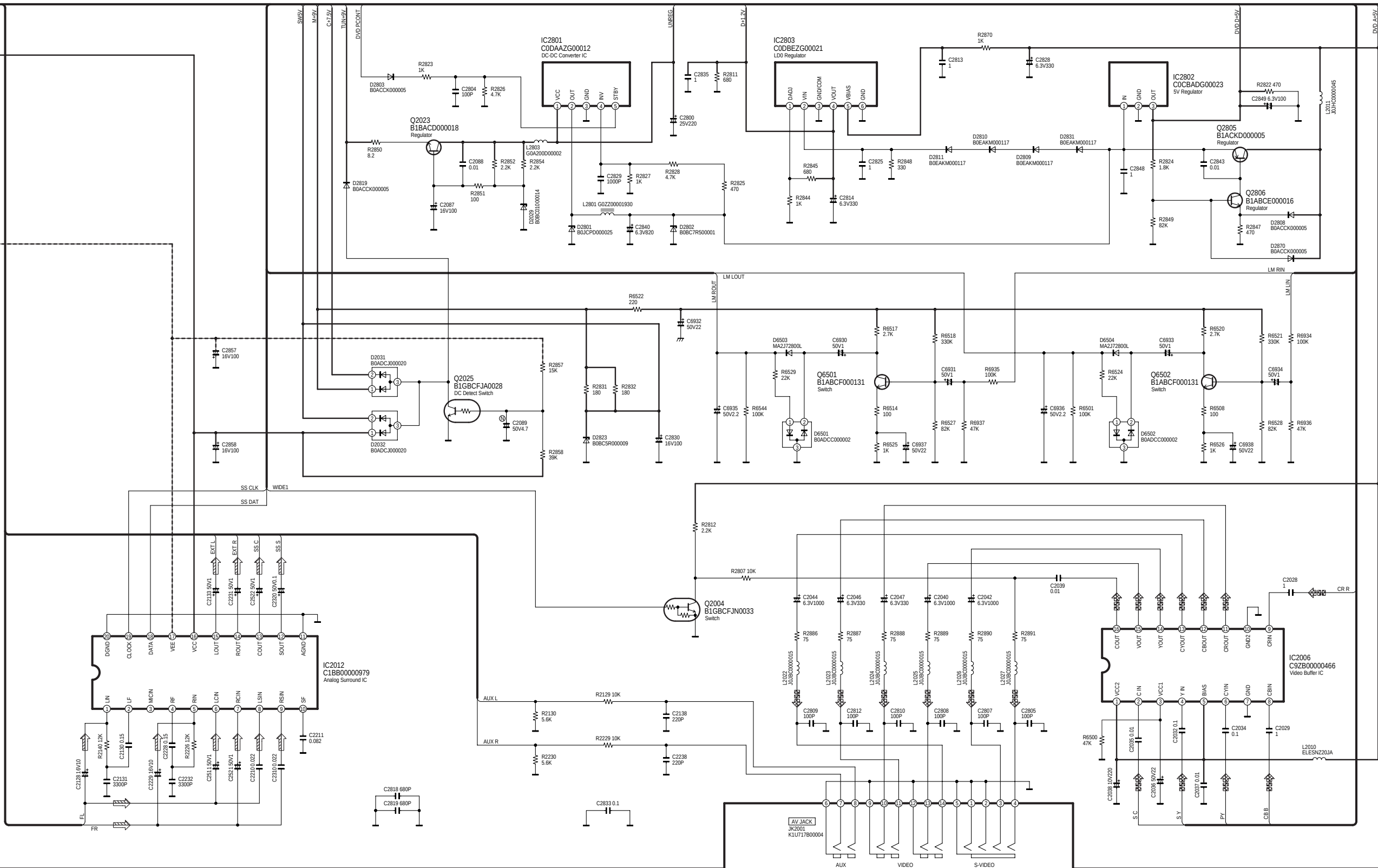


B MAIN CIRCUIT

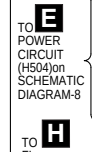


B MAIN CIRCUIT





B MAIN CIRCUIT



The schematic diagram illustrates the power supply section of the E2800 SNE1004-2. It features several integrated circuits (ICs) and discrete components:

- Regulators:** Q2804 (B1ABCE000016), Q2803 (B1BCCG000023), Q2807 (B1BCCD000019), Q2808 (B1ADCF000001), Q2809 (B1ACKD000005), and Q2814 (B1BACD000018).
- Transistors:** Q2804, Q2803, Q2807, Q2808, Q2809, and Q2814.
- Diodes:** D2804 (BOBC9R000008), D2807 (BOACCK000005), D2817 (BOEAKM000117), D2816 (BOEAKM000117), D2815 (BOEAKM000117), D2814 (BOEAKM000117), D2813 (BOEAKM000117), D2847 (25V1000), D2812 (BOEAKM000117), D2822 (BOFBAM000010), D2827 (BOEAKM000117), D2818 (BOBC02900004), and D2824 (BOBC7R500001).
- Capacitors:** C2845 (0.1), C2821 (63V100), C2820 (50V100), C2846 (25V1000), C2816 (63V100), C2817 (50V100), C2848 (25V3300), C2823 (0.01), C2818 (2.7K), C2822 (63V100), C2842 (50V100), C2832 (16V100), C2831 (0.01), C2850 (0.01), C2844 (0.1), and C2825 (25V3300).
- Resistors:** R2816 (820), R2815 (3.3K), R2814 (3.3K), R2806 (0.01), R2837 (4.7), R2824 (25V33), R2819 (2.7K), R2830 (2.7K), R2829 (560), R2821 (150), R2820 (4.7K), R2835 (470), and R2834 (1.8K).
- Other Components:** FP2800 (K5C0202AA0002) and E2800 SNE1004-2.

The diagram shows the interconnections between these components, including the input and output lines for the power supply.

34	35	36	37	38	39	40	41	42	43	44
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H FL CIRCUIT

— :+B SIGNAL LINE ⇨ :MAIN SIGNAL LINE

TO MAIN
CIRCUIT
(CN2009)on
SCHEMATIC
DIAGRAM-7

I POWER BTN
CIRCUIT

SA-HT680PL FL/POWER SW CIRCUIT

SCHEMATIC DIAGRAM-10

